

4

REPORT NO. EOTR 87-1

DTIC FILE COPY

FINAL REPORT

Predictive Validities of Primary Motivation Scales
For Reenlistment Decision-Making

Barbara L. McCombs¹, Richard E. Doll²,
Dennis R. Baltzley², & Robert S. Kennedy²

DTIC
ELECTE
S OCT 07 1987 D
G.D.

¹Denver Research Institute
Denver, CO
²Essex Corporation
Orlando, FL

15 December 1986

The views, opinions, and findings contained in this report are those of the authors and should not be construed as an official Department of the Army position, policy, or decision, unless so designated by other official documentation.

DISTRIBUTION STATEMENT 1

Approved for public release
Distribution Unlimited

UNCLASSIFIED

ADA187247

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS	
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION / AVAILABILITY OF REPORT Approved for public release; distribution unlimited	
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE				
4. PERFORMING ORGANIZATION REPORT NUMBER(S) EOTR 87-1			5. MONITORING ORGANIZATION REPORT NUMBER(S)	
6a. NAME OF PERFORMING ORGANIZATION Denver Research Institute and Essex Corporation		6b. OFFICE SYMBOL (If applicable)	7a. NAME OF MONITORING ORGANIZATION Army Research Institute	
6c. ADDRESS (City, State, and ZIP Code) 1040 Woodcock Road, Suite 227 Orlando, FL 32803			7b. ADDRESS (City, State, and ZIP Code) 5001 Eisenhower Avenue Alexandria, VA 22333-5600	
8a. NAME OF FUNDING / SPONSORING ORGANIZATION U.S. Army Research Institute		8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER MDA 903-86-C-0114	
8c. ADDRESS (City, State, and ZIP Code) 5001 Eisenhower Avenue Alexandria, VA 22333-5600			10. SOURCE OF FUNDING NUMBERS	
			PROGRAM ELEMENT NO.	PROJECT NO.
			TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) Predictive Validities of Primary Motivation Scales for Reenlistment Decision-Making				
12. PERSONAL AUTHOR(S) B. L. McCombs, R. E. Doll, D. R. Baltzley, and R. S. Kennedy				
13a. TYPE OF REPORT Final		13b. TIME COVERED FROM 6/16/86 TO 12/16/86	14. DATE OF REPORT (Year, Month, Day) 15 December 1986	
15. PAGE COUNT 124				
16. SUPPLEMENTARY NOTATION				
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number) Employee motivation, test development, self-system variables, selection, turnover prediction, placement	
FIELD	GROUP	SUB-GROUP		
19. ABSTRACT (Continue on reverse if necessary and identify by block number) > The "new look" in motivation theory emphasizes the influence of self-systems and executive functions on individuals' behavior. Using this literature, a conceptual model was formulated from which a series of primary motivational scales was developed into an inventory to tap these constructs. Over 140 soldiers, who were in the process of making their first-term reenlistment decision, were tested (some twice) with a 10-scale battery assessing perceptions of competency, control, commitment, and other factors. Multiple regression analyses revealed several combinations of scales which were statistically significant in predicting intentions to quit and reenlistment decisions in this pilot study.				
(cont'd)				
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED	
22a. NAME OF RESPONSIBLE INDIVIDUAL Dr. Glenda Nogami			22b. TELEPHONE (Include Area Code) (202) 274-8119	22c. OFFICE SYMBOL PERI-RP

19. Abstract (cont'd)

Improved and early prediction of persons likely to join or remain in the Army for reasons related to motivations can improve allocation of personnel and job satisfaction, and this will be transferred to work settings as well. Other benefits include the identification of another set of predictors that tap motivational variables not currently assessed in existing employment decision models and prediction batteries. The present study should provide a basis for a "smart" software system based on an interactive microcomputer which would contain predictive information that would be useful to the individual faced with a career choice, and it could also be used in conjunction with career counseling by supervisory NCOs.

TABLE OF CONTENTS

	PAGE
PROJECT SUMMARY.....	1
INTRODUCTION	2
Background	3
METHOD	6
Research Design	6
Scale Construction	7
Summary of Scale Construction	10
RESULTS	10
Reliability Analyses	11
Test/Retest	11
Factor Analyses	16
Correlational Analyses	16
Subscale Description	23
DISCUSSION	31
Summary of Phase I Results	31
Implications for Future Research	32
Subsidiary Findings	34
REFERENCES	35
APPENDIX A. Motivational Scales Development Procedure.....	A-1
APPENDIX B. Army Retention Survey.....	B-1
APPENDIX C. Interview Protocol.....	C-1
APPENDIX D. Results of Initial Internal Consistency Analyses.....	D-1
APPENDIX E. Item Level Factor Analyses Results.....	E-1
APPENDIX F. Items Loading on Each Subscale.....	F-1

Accession For	
NTIS	CRA&I <input checked="" type="checkbox"/>
DTIC	TAB <input type="checkbox"/>
Unannounced <input type="checkbox"/>	
Justification	
By	
Distribution /	
Availability Codes	
Dist	Avail and/or special
A-1	



LIST OF TABLES

<u>Table</u>	<u>Page</u>
1 Subscale Descriptions	12
2 Internal Consistencies (Alpha Coefficients)	13
3 Subscale Means and Standard Deviations	14
4 Test/Retest Means and Standard Deviations on Rescored Total Scale Scores	15
5 Test/Retest Correlations on Rescored Total Scale Scores	16
6 Factor Analysis (Pattern Matrix)	17
7 Factor Descriptions	18
8 Multiple Stepwise Regression of Motivational Subscales on Intention to Quit.....	21
9 Multiple Stepwise Regression of Motivational Subscales on Decision to Reenlist.....	22
10 Multiple Regression of GT ASVAB Score on Intention to Quit.....	24
11 Multiple Regression of GT ASVAB Score on Decision to Reenlist..	25
12 Multiple Regression of GT ASVAB and Trait Motivational Subscales on Intention to Quit.....	26
13 Multiple Regression of GT ASVAB and Trait Motivational Subscales on Decision to Reenlist.....	27
14 Stepwise Multiple Regression of the State Motivational Subscales on Intention to Quit.....	28
15 Stepwise Multiple Regression of the State Motivational Subscales on Decision to Reenlist.....	29
16 Stepwise Multiple Regression of the Motivational Subscales on Intention to Quit.....	30

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1 Intercorrelation matrix for all variables; the (23) motivational subscales, job satisfaction variable, (10) ASVAB composites, (2) turnover criteria, and organizational commitment variable.....	19

PROJECT SUMMARY

An individual's perceptions of the job have an obvious influence on that person's decision to reenlist. The "new look" in motivation theory emphasizes the influence of self-systems and executive functions on individuals' behavior. Using this literature a conceptual model was formulated from which a series of primary motivational scales was developed into an inventory to tap these constructs. The primary objective of Phase I was to construct the scales and evaluate in a sample population of soldiers the psychometric properties of the scales. Over 140 soldiers, who were in the process of making their first term reenlistment decision, were tested (some twice) with a 10-scale battery assessing perceptions of competency, control, commitment, and other factors. The battery was scored, analyzed, and refined according to information available from internal consistencies and retest reliabilities. The rescored battery was shown to have sufficient between-subject differences for purposes of prediction, moderate retest reliability, a rational factor structure, and was relatively orthogonal to ASVAB. The zero order correlations between most of the motivational scales and the three indicants of a favorable decision to reenlist were low to moderate and positive. Multiple regression analyses revealed several combinations of scales which were statistically significant in predicting intentions to quit and reenlistment decisions in this pilot study.

The primary objectives of Phase II are to further validate and refine the motivational battery, and also to design a computerized version of the validated battery as a pilot test. A validation and development of both the computerized motivational battery and the preliminary causal model developed in Year 1 will be defined and a software-based career advising system employing the motivational battery variables and ASVAB scores will be mechanized on a microcomputer for a simplified fully-up-and-running model of the full system. A plan describing how the full system (using grades, operational performance data, biodata, family issues, etc) might be developed and implemented in the Army will be included.

Improved and early prediction of persons likely to join or remain in the Army for reasons related to motivations can improve allocation of personnel and job satisfaction and this will be transferred to work settings as well. Other benefits include the identification of another set of predictors that tap motivational variables not currently assessed in existing employment decision models and prediction batteries. The present study should provide a basis for a "smart" software system based on an interactive microcomputer which would contain predictive information that would be useful to the individual faced with a career choice, and it could also be used in conjunction with career counseling by supervisory NCO's. Properly applied, the system would be diagnostic of interaction between the individual and his/her MOS where interventions may be useful. The availability of such a system would have broad application elsewhere in DoD and other federal agencies. The application to industry would be largely through assessment tests in the form of paper-and-pencil and microcomputer based measures.

INTRODUCTION

Despite advancements in the identification of variables predictive of reenlistment decisions, refinements in models of the career decision-making process, and new developments in tests and measurement, the best predictive models of military career decisions leave room for improvement. Using multivariate approaches with aptitude and biodata measures, it has been demonstrated with various military specialties that prediction of pass-fail criteria can be as high as 50% of the variance. On the other hand, criteria such as military reenlistment have been more difficult to predict with existing models, explaining far less than 50% of the variance. For both of these criteria we believe that how a person's self perceptions intersect with his or her job perceptions contribute greatly to these outcomes. The unexplained or error variance in these predictions has significant cost implications from the standpoint of expenditures in training as well as in the retention of needed skilled personnel to support the efficient operation of a vast array of specialized jobs (Hicks & Nogami, 1984). For these reasons, the search continues for factors that can account for additional variance in the prediction of reenlistment decisions. The purpose of this Phase I study was to develop a new conceptualization of the career decision-making process which focuses on the role of a class of self-system variables that are theoretically posited to be primary motivational variables. The goal was the development of a battery which tapped these constructs because in our judgment these factors have not been adequately attended to in previous retention or turnover prediction models.

In order to assure a clear understanding of this report, theoretically-based definitions are provided for the two primary motivational constructs of control and competence. Control can generally be defined as individuals' judgments and perceptions of their capabilities to be self-determining and the masters of their own fate, as well as their understandings of the contingencies responsible for their success and failure. More specifically, these cognitive self-evaluation processes include (a) understandings of the locus of responsibility for events as internal (self) vs. external (others, fate); (b) perceptions of being able to exercise personal responsibility or personal agency over events; and (c) tendencies to attribute reasons for successes and failures to internal (ability, effort) vs. external (luck, others) factors.

Competence can generally be defined as individuals' perceptions or judgments about their capabilities to interact effectively with their environments and to execute the courses of action that are required to handle particular situations. More specifically, these cognitive self-evaluation processes include (a) judgments of personal confidence with respect to specific capabilities or competencies (self-confidence); (b) perceptions of capabilities to easily adjust to new requirements (adaptability); (c) judgments and perceptions of one's inherent value (self-worth); and (d) perceptions of abilities to exercise adequate control over one's actions (competence).

The class of variables hypothesized to be primary in the career decision-making process are self-system variables -- those processes involved in the self-evaluation of competency and control that underlie motivation to pursue a particular course of action. These types of motivational processes

are stressed because of the assumption that human behavior is basically motivated by needs for self-determination and self-development, as well as the need to achieve a sense of personal competency in the achievement of personal development goals. In the employment context of the military, individuals express these needs in a variety of ways which are reflected in their perceptions, expectations, job satisfaction, commitment, career intentions, and ultimate career decisions. If the basic motivational processes associated with these needs can be assessed and understood -- in combination with the assessment and understanding of related situational/environmental factors, and interrelationships with individuals' basic intellectual strengths and capabilities -- military decision-makers will be in a better position to select and match career options with available enlistees and enlisted personnel and thus maximize the probability of retaining needed personnel.

It is our hypothesis that individual differences in basic motivational processes interact sufficiently with the demand characteristics of different jobs so that the validity and economics of reenlistment would be improved if this information were better employed in job assignment.

Background

Potential Role of Primary Motivational Variables in Career Decision-Making. It has been recognized that vocational decision-making involves a complex set of cognitive processes that individuals use to organize information about themselves and their vocational choices, to evaluate alternatives, and to commit themselves to a particular action (Jepsen, 1983). Specifically, recent work in human motivation theory by social, cognitive, and developmental psychologists has led to fairly general agreement regarding the particular importance of individuals' perceptions, expectations, and judgments of personal competency (self-efficacy) and personal causation (self-control) in influencing the motivational bases of decisions (e.g., Bandura, 1982, 1984, 1986; Cervone, 1986; Fishbein & Ajzen, 1975; Lefcourt, 1984; McCombs, 1984, in press; Manderlink & Harackiewicz, 1984; Paris, Lipsom, & Wixson, 1983; Paris, Newman, & Jacobs, 1985; Weiner, 1976, 1980; White, 1959; Wittrock, 1986). In comparisons of three alternative models of military reenlistment decisions, Motowidlo and Lawton (1984) have found perceptions and expectations to be major determinants of intentions to stay and the final decision to stay. Landy and Becker (1985), however, have argued that there is a substantial amount of basic research still needed to understand how cognitive processes and abilities fit into various motivational models.

It can be argued that motivational theorists have made sufficient progress to be able to elucidate the role of self-evaluative processes in motivation and decision-making. It is now widely accepted that individuals are active creators and constructors of their own knowledge and experience bases (e.g., Bandura, 1982, 1984; Harman, 1973; Landy & Becker, 1985; McCombs, 1984, in press; Mischel, 1977; Wittrock, 1986). Those working in the areas of self-theories have also generally agreed that the self is a compound set of multiple, hierarchically organized cognitive structures that exert a powerful influence on attention, organization, and categorization of information, recall, and judgment (Eccles, 1983; Fleming & Courtney, 1984; Marsh, Parker, & Barnes, 1985; Paris & Cross, 1983; Pervin, 1985; Rogers, Kuiper, & Kirker, 1977; Shavelson & Bolus, 1982; Shavelson, Hubner, & Stanton, 1976). Several

theorists have argued that the self acts as the background or setting against which new information, prior experiences, and knowledge are organized into personal schemas (Rogers et al., 1977); and that the self-structure is the largest and most available structure or set of structures in memory, and the central and first structure through which all information flows (Markus & Sentis, 1982; McCombs, in press). As such, the self has come to be conceived as an extremely active and powerful agent in the organization and evaluation of each individual's concept of reality and processing of personal data. When viewed in this light, it is clear that the self is the base set of filters (schemas) through which all information is acted upon and that every decision has a self-referent focus to a greater or lesser degree.

It is argued that how people judge their capabilities for competence and control affects their motivation and behavior and the types of career matches they seek (Bandura, 1982, 1984; Landy & Becker, 1985; Lefcourt, 1984). As Bandura (1982, p. 33) has stated, "Self phenomena lie at the very heart of causal processes because, not only do they function as the most immediate determinants of behavior, but they also give shape to the more distal external influences arising in transactions with the environment. Nevertheless, self-processes have yet to receive the systematic attention in psychological theorizing and research they deserve."

Research that has been conducted on the roles of personal control and competency evaluations has stressed their importance in influencing choice of activities and environmental settings (e.g., Bandura, 1982, 1984, 1986; Lefcourt, 1982, 1984). Generally, this research suggests that people will avoid career situations which they believe to exceed their capabilities, but remain in situations they judge themselves capable of managing. In addition, persons with high needs for personal control will seek out those employment options that allow them to exercise their influences. Butler, Lardent, and Miner (1983) have argued that not only may turnover be due to certain motivational propensities in the individual that interact with aspects of organizational structure and process, but that this view of motivational fit has received little empirical or theoretical attention in the turnover literature. For a number of years, however, research evidence has been accumulating that indicates the importance of variables such as perceived control and competence in positive work attitudes, perceptions of task requirements, job satisfaction, motivation to persist, and success in training (e.g., Chan, Karbowski, Monty, & Perlmutter, 1986; Dailey, 1979; Booth, Hoiberg, & Webster, 1976; Booth, Webster, & McNally, 1976; Gunderson & Johnson, 1965; Kasperson, 1982; Lefcourt, 1984). In addition, early work on the turnover of Navy pilot trainees had indicated the importance of self-system variables such as needs for competence and control as discriminators of those trainees who voluntarily withdrew (Bucky, 1971; Bucky & Burd, 1970).

When motivational and personality variables have been used in turnover research, findings are somewhat disappointing in terms of additional variance-accounted-for. For example, Booth, Hoiberg, & Webster (1976) report that motivational variables, such as liking the career field, only added 3% to 8% to the variance-accounted-for in the prediction of success in Navy paramedical training. Furthermore, Arnold and Feldman (1982) have reported that a multivariate model of job turnover which included motivational

variables only had an $r = .44$, with motivational variables contributing only an additional 1% to the variance-accounted-for. In spite of these findings, Motowidlo and Lawton (1984) have recently argued for the inclusion of affective and cognitive factors in models of reenlistment decisions. Included in these factors are perceptions, values, and beliefs. Although Motowidlo and Lawton do not specifically address the self-evaluative processes of competency and control, it is clear from self-theories and research that these are primary types of perceptions and beliefs which are antecedents of job satisfactions, expectancies, commitments, intentions, and actual reenlistment decisions. Work by those interested in the enhanced prediction possible with self-system variables has suggested that as much as 20-30% of the variance could be accounted for by the inclusion of these variables in prediction models (e.g., Borman, Rosse, & Abrahams, 1980; Hoyle, 1986). A significant problem in research with primary motivational variables, however, has been the lack of adequate definitions as well as carefully developed and well validated measures of these constructs (Lefcourt, 1984; Palenzuela, 1984). It was to this end that the present effort was directed.

In addition to the potential improvement in the prediction of career decisions that may result from the inclusion of primary motivational variables (i.e., self-evaluations of personal control and competence), substantial evidence is accumulating on the importance of including measures of an individual's commitment to a particular organization in predicting career intentions and actual career decisions (Martin & O'Laughlin, 1984; Mowday, Koberg & McArthur, 1984). The concept of organizational commitment has come under increasing scrutiny in the last decade. This interest may be traced to two occurrences; first, the diversity of commitment definitions, and second, the important relationship between commitment and organizational outcomes such as withdrawal. The organizational commitment construct has been defined and operationalized in over a dozen different ways in the last 20 years. The most widely used general definition of commitment is that by Mowday, Porter, and Steer, (1982). Their definition suggests that commitment is the "relative strength of an individual's identification with and involvement in a particular organization". Organizational commitment is considered to be a critical factor in organizational withdrawal. Support for this second definition is most evident in the turnover literature. We believe that any formulations of a conceptual model of reenlistment decisions should feature organizational commitment prominently.

Objectives of Phase I Research. Based on the foregoing background review, Phase I research was designed to address the following objectives:

1. To develop a theoretically-based battery of primary motivational variables, as well as other variables specified in the preliminary causal model of reenlistment decisions.
2. To administer the battery to a sample of Army "desirable" enlisted personnel who are in at least two MOSs and who are in the process of making their first term reenlistment decision.
3. To determine the psychometric properties (retest and internal reliability, preliminary construct and predictive validity) of the reenlistment battery.

4. To explore relationships of battery variables with measures of ability (ASVAB).

5. To derive recommendations for subsequent Phase II research with the battery.

METHOD

Research Design

Psychometrics. It was our intention in Phase I of this study to follow closely the classical approach to development of scales, inventories, and tests. That is, items were initially developed by experts following theory and this process is described more fully below. The items were then formed into scales according to their content and classified accordingly. The scales were then administered to a sample. Reliability estimates, both internal consistency and test retest, were obtained. Testing was followed by controlled interviews by the test administrators in order to provide insights which might be useful for subsequent item construction.

General Analyses. Concurrent with the administration of the primary motivational subscales, commitment measures and criterion data were collected on all subjects along with the retrieving of ASVAB composite scores available from a previous administration. Descriptive and inferential statistics were calculated and the primary motivational subscale items were analyzed for reliability. Based on the results of this process, subscale development analyses continued where subscales were then rescored, computed and underwent a series of statistical analyses in conjunction with the measures of 10 ASVAB scores and the reenlistment decision criteria. These analyses included factor analyses, multiple regression analyses, computation of zero order correlations, and various other descriptive statistics.

Subjects. Subjects were U.S. Army enlisted personnel, primarily males, from Ft. Rucker, Alabama. All subjects were informed of the purpose of the testing, the disposition of the data, and the voluntary nature of their participation as per the privacy act of 1974. The subjects were initially chosen on the basis of three criteria: (1) the subjects had to be within 3-6 months of a reenlistment decision, (2) all of the subjects had to be within two Military Occupational Specialties (MOS) specifically, helicopter crewmen and administrative specialist, and (3) all participants had to be first term soldiers coming to the end of their first tour who were considered by the Army as desirable.

Data Collection. There were two visits to the field site at Ft. Rucker, Alabama. Initially a single visit to obtain a sample size of approximately N=80 was planned, but field data collection logistical problems intervened and it became necessary to conduct the experiment in two sections. The application of the former criteria at the assigned site resulted in availability of only 46 subjects in this first attempt and these data included test/retest scores. In order to obtain a larger sample size, two of the criteria (first term status and limited to two MOS's) were relaxed for the second administration which was accomplished one week later. On this

occasion, measures were obtained from 78 subjects and this administration did not include a retest. The total sample size for the two administrations was 124.

Research Questions. Phase I was designed to answer the following questions:

1. Can the constructs of competency and control be measured reliably?
2. Do measures of competency and control predict criteria reflecting decisions to reenlist or not reenlist?
3. Do measures of commitment add to the predictive capability of other measures?
4. Do motivationally related measures (competency, control and commitment) add uniquely to the predictive capability presently offered by ASVAB?

Scale Construction

1. Competency and Control. In keeping with the construct definitions, measures of control and competence were developed to assess each of the dimensions of these constructs. In addition, given the support in the literature for both global and domain-specific assessments of self-system variables (e.g., Fleming & Courtney, 1984; Harter, 1985; Hoyle, 1986), and for trait and state assessments of both global and domain-specific variables (e.g., Bandura, 1982; Mischel, 1977; Nyquist, 1986; Spielberger & Diaz-Guerrero, 1983), separate global and domain specific measures of control and competence that met the criteria of assessing the theoretically based underlying constructs were examined. Items which were conceptually related to the constructs of interest were selected and modified to fit the global and domain-specific, trait, and state assessment needs. New items were generated as necessary to obtain at least 10 items per construct subscale. The same items were used for the preliminary versions of the trait and state counterparts of global and the domain-specific measures, such that subsequent empirical evaluations could determine the best items for these respective scales. (See Appendix A for documentation of scale construction procedures.)

The resulting measures and number of items per subscale are as follows:

Subscales	Control				Competency			
	Global		Domain-Specific		Global		Domain-Specific	
	Trait State		Trait State		Trait State		Trait State	
	Trait	State	Trait	State	Trait	State	Trait	State
Control								
1 - Locus of Control	10	10	10	10				
2 - Personal Control	19	19	10	10				
3 - Attributions	11	11	10	10				
Competence								
1 - Self-Confidence					13	13	10	10
2 - Adaptability					10	10	10	10
3 - Self-Worth					15	15	10	10
4 - Competence					12	12	10	10
Total Number of Items: (320)	40	40	30	30	50	50	40	40

2. Importance. In addition to the preceding eight measures and their respective subscales, a measure of importance was also developed to assess individuals' evaluations of the importance of being in control and of being competent in the job setting. Many theorists in the area of self-evaluative process assessment have argued that importance or valence measures are necessary to adequately assess the relationships between competence and control and criterion variables of interest (e.g., Borman, Rossee, & Abrahams, 1980; Harter, 1985; Lefcourt, 1984; Motowildo & Lawton, 1984; Palenzuela, 1984), and thus items for assessing importance in both these areas were developed. The resulting 40-item importance measure consisted of 20 competence items and 20 control items.

3. Commitment. A scale measuring organizational commitment was accomplished in three steps. First items from the Organizational Commitment Questionnaire (OCQ; Mowday, Steers, & Porter, 1979), Commitment to the Union (CTU) Scale (Gorden, Philpot, Burt, Thompson, & Spiller, 1980), the Continuance Commitment Scale (CCS) and Affective Commitment Scale (ACS) (Meyer & Allen, 1984), were taken "as is" (with the permission of the scale authors). Second, items that did not relate directly to Organizational Commitment were modified or deleted. The third step was to generate new items.

All items were rationally placed in one of the three categories creating three subscales of behavioral, attitudinal, and affective items. From this first trichotomy a total of 15 attitudinal items, 5 affective items, and 9 behavioral items were found. This indicated a weakness in the behavioral and

affective categories and several items were generated to create a rough balance between subscales.

This item pool was given to 14 judges to be rated on agreement of the trichotomous split and to assess the degree to which they believe the items to measure Organizational Commitment. Specifically, the judges were given a list of all items and asked to categorize each item in one of the three subclasses. Secondly, they were asked to evaluate each item, on a 5-point Likert-type scale, as to whether the item assesses Organizational Commitment or not ("Definitely indicates organizational commitment" to "Definitely does not indicate organizational commitment").

These data were analyzed and a measure of interrater agreement was obtained for the trichotomy of the items, utilizing a cut off of 75% concurrence. Nine items were dropped or reworded utilizing these procedures.

4. Criteria. Two criteria of reenlistment decisions were used in this study. The first criterion was contained on the Background Information page of the booklet employed in this study (labelled "Army Retention Survey") where the soldier was asked as to whether he/she had made a decision to reenlist or not and if so, what was the decision. This provided a dichotomous criterion of reenlist--not reenlist.

The second criterion was contained on the last page of the Army Retention Survey and was titled CAREER INTENTIONS (Lyons, 1971). The subject was asked the following three questions:

- o If you were completely free to choose, would you prefer to continue working in this organization or would you prefer not to?
 - 5. I definitely would prefer to leave.
 - 4. I probably would prefer to leave.
 - 3. I would be undecided about whether to leave or not.
 - 2. I probably would prefer not to leave.
 - 1. I definitely would prefer not to leave.
- o How long would you like to stay in this organization?
 - 1. I plan to stay to retirement.
 - 2. I plan to stay several years, unsure about retirement.
 - 3. Undecided whether or not I'll stay.
 - 4. I will probably leave with the next few years.
 - 5. I will definitely leave within the next year.
- o If you left this organization, would you return if you could?
 - 1. I definitely would return.
 - 2. I probably would return.
 - 3. I don't know whether I would return or not.
 - 4. I probably would not return.
 - 5. I definitely would not return.

The three items were scored from 1-5 (N.B. the first item is reverse scored) and summed into a single score.

Summary of Scale Construction

At this point all the paper and pencil measures, which were expressly designed for this study, were combined into a single test battery having 12 scales: 8 related to "competency" and "control" ; 1 related to "importance"; 1 related to "commitment"; 1 related to "job satisfaction"; and 1 related to "intentions". The primary motivational scales, the intention to reenlist criteria, and a background information sheet were combined into one package and entitled "The Army Retention Survey" and appears as Appendix B. The averaged administration time was approximately 1.5 hours.

Controlled Interviews. Controlled interviews were conducted in order a) to collect alternative measures of competency and control, and b) to assess potentially important concerns about reenlistment that soldiers might have which were not covered in the survey portion of the data collection effort. Questions included self-perceptions about job performance, contribution, and reenlistment decisions. See Appendix C for a complete copy of the interview protocol.

Armed Services Vocational Aptitude Battery (ASVAB). Each subject's ASVAB composite scores from initial Army inprocessing were gathered from his/her respective personnel file. The ASVAB scores used in the analysis were as follows:

1. General Technical (GT)
2. General Maintenance (GM)
3. Electronics (EL)
4. Clerical (CL)
5. Motor Maintenance (MM)
6. Surveillance/Communications (SC)
7. Combat (CO)
8. Field Artillery (FA)
9. Operator/Foods (OF)
10. Skilled Technical (ST)

RESULTS

Data analyses employed in the Phase I battery validation consisted of the following:

- 1) Internal consistency measures using alpha coefficients (Cronbach, 1951) for each of the 8 primary motivational battery scales, the importance scale (Scale 9), and job-satisfaction scale (Scale 10).
- 2) Test/retest correlations of items and subscales within each motivation scale for those subjects in the sample who received two administrations of the battery.
- 3) Factor analyses on the items within each scale that demonstrated acceptable internal consistency and test/retest reliabilities.

- 4) Rescoring of subscales based on reliability analyses and factor analyses.
- 5) Zero-order correlations between all variables available in the study and the rescored subscales from the 8 primary motivational battery scales.
- 6) Multiple regression using the rescored subscales identified in the factor analyses, job satisfaction, and commitment to predict (a) decisions to reenlist or not reenlist, and (b) intentions to stay in or leave the Army.
- 7) Multiple regression using the rescored subscales and ASVAB measures to predict (a) decisions to reenlist or not reenlist and (b) intentions to stay in or leave the Army.

The preceding analyses were calculated using the SPSSX/PC version 1.1. Results from each of these steps are described in the following sections.

Reliability Analyses

Internal Consistency. Coefficient alpha's (Cronbach, 1951) for each of the 8 primary motivational scales and scales 9 and 10 (see Table 1 for subscale descriptions) were calculated. Items showing corrected item-total correlations of less than 0.25 (Spielberger, Personal Communication, October 30, 1986) were dropped from further analysis (see Appendix D for the results of the initial internal consistency analyses). Coefficient alphas for the remaining items in each scale were then calculated and the results of these analyses are shown in Table 2. Table 2 also reports the alpha coefficients for the rescored subscales within each scale that were formed as a result of the factor analysis of items (reported later). For the rescored total scales, alpha's ranged from 0.85 to 0.97, indicating high internal consistencies for all 10 scales. Alpha coefficients for the rescored subscales ranged from 0.66 to 0.94, indicating moderate to high internal consistencies for these subscales. It should be noted that subscales with less than 4 items were not included as separate subscales in primary predictive validity analyses, although the items forming these subscales were retained on the overall scale reliability analyses. The subscale means and standard deviations are reported in Table 3.

Test-Retest

a) Items - Correlations between original item scores were calculated for those subjects in the first administration group who took the battery twice. Results of the item level test/retest analyses were used to further refine the "best" scales (along with the internal consistency results reported on in Appendix D).

b) Scale Scores - Reliable items were retained for use in rescoring the total scale. Other analyses were performed and retest reliabilities were calculated on the basis of the results of the test/retest analyses. These results of the rescored total scale scores are reported in Tables 4 and 5.

Table 1. Subscale Descriptions

Subscale Number	Description
1-1	Global trait perceptions of control maintenance
1-2	Global trait beliefs about locus of responsibility
1-3	Global trait perceptions of ability to take personal control
2-1	Global trait perceptions of self-confidence, adaptability, and worth
2-2	Global trait perceptions of competence and success
2-3	Global trait perceptions of abilities and skills
3-1	Domain-specific trait beliefs about locus of responsibility
3-2	Domain-specific trait perceptions of ability to take personal control
3-3	Domain-specific trait beliefs about reasons for success
4-1	Domain-specific trait perceptions of self-confidence, competence, & worth
4-2	Domain-specific trait perceptions of adaptability and self-acceptance
4-3	Domain-specific trait perceptions of self-adequacy and success
5-1	Global state perceptions of control maintenance
5-2	Global state beliefs about locus of responsibility
5-3	Global state perceptions of ability to take personal control
6-1	Global state perceptions of self-confidence, adaptability, & competence
6-2	Global state perceptions of self-worth and self-acceptance
7-1	Domain-specific state beliefs about locus of responsibility
7-2	Domain-specific state perceptions of control maintenance
8-1	Domain-specific state perceptions of self-confidence, competence, & worth
8-2	Domain-specific state perceptions of self-adequacy and success
9-1	Trait importance of order, structure, efficiency
9-2	Trait importance of challenge, growth, responsibility

Table 2. Internal Consistencies (Alpha Coefficients)

<u>Scale</u>	<u>n</u>	<u>No. of Items</u>	<u>Alpha</u>
1	119	29	0.85
2	121	33	0.94
3	120	24	0.87
4	118	30	0.91
5	114	33	0.90
6	122	35	0.95
7	117	25	0.88
8	117	27	0.94
9	120	33	0.94
10	119	30	0.97

<u>Trait Subscales</u>	<u>n</u>	<u>No. of Items</u>	<u>Alpha</u>
1-1	119	09	0.78
1-2	119	12	0.75
1-3	119	05	0.64
2-1	121	13	0.90
2-2	121	07	0.78
2-3	121	04	0.82
3-1	120	11	0.86
3-2	120	05	0.67
3-3	120	04	0.70
4-1	118	11	0.89
4-2	118	08	0.81
4-3	118	04	0.66

<u>State Subscales</u>	<u>n</u>	<u>No. of Items</u>	<u>Alpha</u>
5-1	114	13	0.85
5-2	114	07	0.75
5-3	114	06	0.68
6-1	122	16	0.92
6-2	122	07	0.85
7-1	117	11	0.85
7-2	117	07	0.79
8-1	117	22	0.94
8-2	117	04	0.66

<u>Importance Subscales</u>	<u>n</u>	<u>No. of Items</u>	<u>Alpha</u>
9-1	120	14	0.91
9-2	120	15	0.90

Table 3. Subscale Means and Standard Deviations
(n = 105)

Subscale	No. of Items	Mean	S.D.
1-1	09	29.91	3.66
1-2	12	38.23	5.30
1-3	05	16.46	2.57
2-1	13	43.76	6.02
2-2	07	24.35	3.08
2-3	04	13.94	2.19
3-1	11	33.63	5.76
3-2	05	16.81	2.47
3-3	04	11.49	2.79
4-1	11	39.71	5.00
4-2	08	27.33	3.79
4-3	04	14.50	1.84
5-1	13	44.60	5.01
5-2	07	21.83	3.92
5-3	06	19.97	2.86
6-1	16	54.86	7.22
6-2	07	24.32	3.31
7-1	11	33.46	5.68
7-2	07	22.85	3.53
8-1	22	76.83	10.30
8-2	04	14.29	2.13

Table 4. Test-retest Means and Standard Deviations
on Rescored Total Scale Scores

<u>SESSION</u>	<u>SCALE</u>	<u>CASES</u>	<u>MEAN</u>	<u>STD DEV</u>
1	1	36	93.4444	8.8623
2	1	37	91.7027	17.6743
1	2	38	111.5526	13.9094
2	2	37	109.3514	22.7855
1	3	38	72.3947	11.4125
2	3	36	71.1667	15.4762
1	4	37	103.2432	12.7266
2	4	38	98.6316	21.3344
1	5	34	105.9118	12.6644
2	5	37	103.2973	18.6322
1	6	39	116.3590	14.9305
2	6	37	115.2432	23.8577
1	7	35	77.5714	10.5029
2	7	38	73.5789	15.7834
1	8	35	93.1429	12.4856
2	8	37	90.5135	20.0882
1	9	37	110.5405	13.1563
2	9	37	107.1081	21.6138
1	10	37	79.2703	30.6537
2	10	36	82.1667	32.6028

Table 5. Test/Retest Correlations on Rescored Total Scale Scores

Scale	n	Correlation	Sig.
1	34	0.69	<.001
2	36	0.59	<.001
3	35	0.81	<.001
4	36	0.61	<.001
5	32	0.76	<.001
6	37	0.62	<.001
7	34	0.81	<.001
8	33	0.58	<.001
9	35	0.48	<.01
10	35	0.86	<.001

Table 4 reports the means and standard deviations of both administrations of scales 1 through 10, and Table 5 reports the test/retest correlations of the rescored total scales. Session 2 mean scores are lower than Session 1 and standard deviations are higher. As can be seen in Table 5, retest total scale correlations ranged from 0.48 to 0.86, indicating moderate to high test/retest reliabilities.

Factor Analyses

All factor analyses were either Principle Component Analysis (PCA), or Principle Factor Analysis (PFA) with varimax rotations (or oblique rotations where noted).

Two sets of factor analyses were calculated to provide preliminary descriptive information on (a) the structure of individual scales, and (b) the structure of rescored subscales across the eight primary motivational battery scales. The pattern matrix for the rescaled subscales is reported in Table 6 where a four-factor solution is shown. Table 7 provides a rational description of the subscales that enter the factor analyses.

Correlational Analyses

Zero-order Correlations. Correlations between the rescored motivational battery subscales (21 variables), the importance scale subscales (2 variables), the job satisfaction scale (1 variable), the ASVAB test scales (10 variables), the commitment scale (1 variable), and the intentions and decision criterion scores (2 variables) are reported in Figure 1. In general, these correlations indicate (a) moderate to high intercorrelations between subscales within each primary motivational scale; (b) moderate to high intercorrelations between state and trait revisions of subscales; (c) low to high intercorrelations between global and domain-specific counterparts of the control and competence subscales; (d) negligible to low correlations between

Table 6. Factor Analysis (Pattern Matrix)

Subscales	Factor 1	Factor 2	Factor 3	Factor 4
8-1	0.88			
6-1	0.86			
4-2	0.83			
4-1	0.82			
2-1	0.76			
5-1	0.75			
6-2	0.74			
7-2	0.72			
1-1	0.71			
3-2	0.68			
2-3	0.68			
7-3		0.82		
7-1		0.82		
3-1		0.79		
3-3		0.76		
4-3			0.72	
8-3			0.72	
1-3			0.64	
2-2			0.63	
6-3			0.60	
1-2				0.70
5-2				0.59

* Note: Subscale loadings on factors other than their primary factor are deleted from this Table.

Table 7. Factor Descriptions

Factor	Description
1	Competence and Control Maintenance. Subscales loading on this factor primarily included global and domain-specific, trait and state competence measures plus the subscales related to perceptions of ability to maintain control.
2	Domain-Specific Internal vs. External Control. Subscales loading on this factor primarily included domain-specific trait and state measures of beliefs about the locus of responsibility for events.
3	Self-Adequacy and Ability to Take Personal Control. Subscales loading on this factor primarily included global and domain-specific, trait and state measures of perceptions of self-adequacy and success and perceptions of ability to take personal control.
4	Global Internal vs. External Control. Subscales loading on this factor primarily included global trait and state measures of beliefs about the locus of responsibility for events.

the motivational subscales and ASVAB scores, with only a slight tendency for subscales reflecting beliefs about levels of responsibility and perceptions of competence and ability to be related to some of the ASVAB scores; (e) low to moderate negative correlations between the motivational subscales and both lack of organizational commitment and job satisfaction, with the highest negative correlations being found between subscales reflecting domain-specific beliefs about levels of responsibility for events; (f) a moderate positive correlation between the measures of organizational commitment and job satisfaction (Note: due to scoring formats this indicates a positive relationship with commitment); (g) negligible to low negative correlations between the motivational subscales and intentions to stay or leave, with the highest negative correlations being found between subscales reflecting domain-specific beliefs about locus of responsibility for events (again, due to response scoring, this would indicate a positive relationship between the subscales and intent to stay); (h) low to moderate positive correlations between ASVAB scores, organizational commitment, job satisfaction and intentions to stay or leave, with the highest positive correlation being found between commitment and intentions; (i) negligible to low negative correlations between all variables and the decision to stay or leave variable, with the highest negative correlations being found between the ASVAB composite scores and commitment; and (j) a high negative correlation between intentions to stay or leave and the reported decision (due to scoring reversals on the intention variable, this is actually a positive relationship) because of scoring reversals in one of the criteria.

An unfortunate consequence of using three different criteria with slightly different bases is that the score's scaling formats were in different directions. However, with some exceptions (viz., subscales 1-3, 3-1, 5-2 and 7-1) in general the relationships between primary motivational variables and the measures of reenlistment are positive -- high scores on the motivation section are predictive of retention. In the case of ASVAB, which is slightly positive with motivational variables, the relationship, if anything, is reversed -- persons with higher ASVAB scores would intend to leave and are less committed to stay. We intend in Phase II to pursue the possibility that this relationship reflects a "moderator" variable.

Multiple Stepwise Regressions. Of central interest in the validation of the motivational scales was an examination of their potential ability to predict intentions to stay or leave and the reported decision. Tables 8 and 9 provide the multiple stepwise regression of the motivational subscale predictors on the intention and decision to reenlist criteria, respectively. Both outcomes were statistically significant ($p < .02$). These results must clearly be viewed as preliminary and tentative and they are likely to shrink on cross validation. On the other hand, even with an initial attempt on a small sample the psychometric properties of the scales are encouraging. Moreover, the factors which result are theoretically meaningful and interpretable and provide a promising basis for further construct validation with the primary motivational variables. Motivational variables most predictive of intentions were global state perceptions of control maintenance, domain-specific state perceptions of control maintenance, and domain-specific state beliefs about locus of responsibility, which together accounted for approximately 11% of the adjusted variance. The variables most predictive of reported decisions to stay or leave were global state perceptions of ability to take personal control and domain-specific state beliefs about locus of responsibility, which together conservatively accounted for 9% of the variance.

**Table 8. Multiple Stepwise Regression of
Motivational Subscales on Intention to Quit**

Variables in Equation	B	SEB	Beta	T	Sig. T
5-1	0.187	0.067	0.314	2.81	0.006
7-2	-0.193	0.102	-0.222	-1.89	0.062
7-1	-0.139	0.058	-0.235	-2.37	0.020
(Constant)	10.80	2.94		3.67	0.000
Multiple R	0.37				
R. Square	0.14				
Adjusted R Square	0.11				
Standard Error	3.10				

Analysis of Variance

	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>
Regression	03	154.54	51.51
Residual	99	950.06	9.60

F = 5.37 p < 0.002

At $p < 0.01$ the following variables were entered:

	<u>Mult. R</u>	<u>R²</u>	<u>F</u>	<u>Sig.</u>
2-1	0.46	0.21	2.76	0.007
6-2	0.45	0.21	3.07	0.004
4-1	0.44	0.20	3.35	0.003
1-1	0.43	0.20	3.64	0.003
2-3	0.41	0.17	4.01	0.002

**Table 9. Multiple Stepwise Regression of
Motivational Subscales on Decision to Reenlist**

Variables in Equation	B	SE B	Beta	T	Sig.T
5-3	-0.054	0.019	-0.315	-2.78	0.007
7-1	0.027	0.010	0.306	2.70	0.008
(Constant)	0.670	0.405		1.68	0.098
Multiple R		0.34			
R Square		0.12			
Adjusted R. Square		0.09			
Standard Error		0.48			

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	02	2.45	1.22
Residual	82	18.66	0.23

F = 5.38

p < 0.006

At p < 0.02 the following variables were entered:

	<u>Mult. R</u>	<u>R²</u>	<u>F</u>	<u>Sig.</u>
4-3	0.40	0.16	2.97	0.017
8-1	0.38	0.14	3.31	0.015
5-1	0.37	0.13	4.17	0.009
3-3	0.34	0.12	5.38	0.006

Of additional interest was an analysis of the relative contribution of the motivational subscales in predicting these retention criteria as compared with the General Technical ability measure (the ASVAB GT score). Due to high intercorrelations of the 10 ASVAB composites suggesting they are largely univariate (Dunlap, Bittner, Jones, & Kennedy, 1986) and to avoid loss of degrees of freedom, all comparisons reported are with GT alone. Separate multiple stepwise regression analyses were computed with GT alone, GT with the trait subscales, and GT with the state subscales for both the intentions and decision criteria. Results of these analyses are reported in Tables 10 through 17. In general, these analyses suggest that (a) the ASVAB GT score can account for 5% and 8% of the adjusted variance in the intentions and decision criteria, respectively; (b) when trait motivational subscales are

added, the percentage of the adjusted variance accounted for on the intentions criterion increases to 13%, while the same conservative test ($p < 0.001$) did not add trait motivational subscales on the decision criterion; and (c) when state motivational variables are added, the percentage of the adjusted variance accounted for increases to 16% on both the intentions and decision criterion variables. Subscales from the control subscales tend to be more predictive in these analyses than competency subscales; however, when the significance level is relaxed to $p < 0.01$, several of the competency subscales significantly contribute to the prediction of these retention-related criteria.

As a final examination of the potential predictive validity of a full model that involved all the rescored motivational subscales, these variables were entered into a multiple stepwise regression analysis to predict intentions to stay or leave. Results of this analysis are reported in Table 16, which indicates that potentially 16% of the variance can be accounted for with all 25 subscale variables. It should be noted that rescored subscales with fewer than 4 items were also included in this analysis and two of these subscales (4-4, 6-4) entered the prediction first.

Specifically, these subscales are as follows:

Subscale Description

- 4-4 Domain-specific trait perceptions of competence and confidence regarding career choice
- 6-3 Global state perceptions of ability to be successful
- 6-4 Global state perceptions of self-confidence and adequacy
- 7-3 Domain-specific state perceptions of locus of responsibility for events

(Note: Appendix F shows the specific items loading on all subscales.)

THIS
PAGE
IS
MISSING
IN
ORIGINAL
DOCUMENT

Table 11. Multiple Regression of GT ASVAB Score on Decision to Reenlist

Variables in Equation	B	SE B	Beta	T	Sig. T

ASVAB-GT	9.950	3.873	0.306	2.57	0.012
(Constant)	1.600	0.416		3.84	0.000
	Multiple R		0.31		
	R Square		0.09		
	Adjusted R Square		0.08		
	Standard Error		0.48		
	<u>Analysis of Variance</u>				
	<u>DF</u>	<u>Sum of Squares</u>		<u>Mean Square</u>	
Regression	1	1.53		1.53	
Residual	64	14.81		0.23	
	F = 6.60	p < 0.013			

Table 12. Multiple Regression of GT ASVAB
and Trait Motivational Subscales on Intention to Quit

Variables in Equation	B	SE B	Beta	T	Sig. T
ASVAB-GT	0.057	0.021	0.267	2.70	0.008
3 - 1	-0.170	0.057	-0.296	-2.99	0.004
(Constant)	9.204	2.913		3.16	0.002

Multiple R 0.39
R Square 0.15
Adjusted R Square 0.13
Standard Error 3.07

Analysis of Variance

	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>
Regression	2	145.41	72.71
Residual	87	818.41	9.41

F = 7.73

p < 0.001

At p < 0.02 the following variables were entered:

	<u>Mult. R</u>	<u>R²</u>	<u>F</u>	<u>Sig.</u>
4-2	0.43	0.18	3.06	0.009
3-2	0.42	0.17	3.56	0.006
1-2	0.41	0.17	4.23	0.004
1-3	0.40	0.16	5.39	0.002
2-2	0.39	0.15	7.73	0.001

Table 13. Multiple Regression of GT ASVAB and Trait
Motivational Subscales on Decision to Reenlist

Variables in Equation	B	SE B	Beta	T	Sig. T
ASVAB-GT	9.950	3.873	0.306	2.57	0.012
(Constant)	1.600	0.416		3.84	0.000
Multiple R			0.31		
R Square			0.09		
Adjusted R Square			0.08		
Standard Error			0.48		

Analysis of Variance

	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>
Regression	1	1.53	1.53
Residual	64	14.81	0.23

F = 6.60

p < 0.013

At p < 0.02 the following variables were entered:

	<u>Mult. R</u>	<u>R²</u>	<u>F</u>	<u>Sig.</u>
2-2	0.39	0.16	3.79	0.015
4-2	0.36	0.13	4.71	0.012
3-1	0.31	0.09	6.60	0.013

Table 14. Stepwise Multiple Regression of the State
Motivational Subscales on Intention to Quit

Variables in Equation	B	SE B	Beta	T	Sig. T
GTI	0.051	0.021	0.251	2.556	0.0124
7-1	-0.145	0.060	-0.245	-2.374	0.0198
7-2	-0.200	0.106	-0.230	-1.880	0.0636
5-1	0.165	0.070	0.277	2.366	0.0203
(Constant)	6.415	3.50		1.831	0.070

Multiple R 0.45
R Square 0.201
Adjusted R Square 0.163
Standard Error 3.00

Analysis of Variance

	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>
Regression	4	194.037	48.509
Residual	85	769.787	9.05

F = 5.356 p < 0.0007

At p < 0.006 the following variables were entered:

	<u>Mult. R</u>	<u>R²</u>	<u>F</u>	<u>Sig.</u>
5-2	0.459	0.211	3.134	0.006
8-2	0.457	0.209	3.660	0.003
6-1	0.453	0.206	4.357	0.001
5-3	0.448	0.201	5.356	0.001

Table 15. Stepwise Multiple Regression of the State
Motivational Subscales on Decision to Reenlist

Variables in Equation	B	SE B	Beta	T	Sig. T
GT1	-0.0009	0.0003	-0.294	-2.57	0.0125
7-1	0.028	0.011	0.314	2.53	0.0136
5-3	-0.048	0.021	0.282	-2.27	0.0265
(Constant)	1.563	0.56		2.79	0.007

Multiple R 0.448
R Square 0.201
Adjusted R Square 0.162
Standard Error 0.458

Analysis of Variance

	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>
Regression	3	3.28	1.09
Residual	62	13.044	0.21

F = 5.1208 p < 0.0028

At p < 0.007 the following variables were entered:

	<u>Mult. R</u>	<u>R²</u>	<u>F</u>	<u>Sig.</u>
8-1	0.504	0.254	3.34	0.007
5-1	0.483	0.233	3.64	0.006
5-2	0.463	0.214	4.17	0.005
8-2	0.449	0.201	5.20	0.003

Table 16. Stepwise Multiple Regression of the
Motivational Subscales on Intention to Quit

Variables in Equation	B	SE B	Beta	T	Sig. T
4-4	-0.224	0.167	00.139	-1.339	0.184
6-4	-0.719	0.361	-0.239	-1.99	0.050
1-3	-0.287	0.142	-0.210	-2.01	0.047
1-2	0.118	0.070	0.188	1.67	0.099
2-3	0.339	0.204	0.227	1.65	0.102
7-2	-0.293	0.111	-0.338	-2.63	0.010
2-2	0.221	0.180	0.162	1.23	0.221
5-1	0.176	0.080	0.296	2.19	0.031
4-1	0.084	0.085	0.131	0.98	0.329
2-1	-0.078	0.083	-0.142	-0.94	0.348
(Constant)	6.896	3.530		1.95	0.054

Multiple R 0.490
R Square 0.240
Adjusted R Square 0.153
Standard Error 3.028

Analysis of Variance

	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>
Regression	10	260.974	26.097
Residual	92	843.634	9.170

F = 2.846

p < 0.004

DISCUSSION

Summary of Phase I Results

The primary results of the Phase I validation of the Army Retention Survey, which included eight primary motivational scales to assess individuals' global and domain-specific, trait and state, evaluation of competence and control, as well as measures of the trait importance of job-related competence and control variables, job-satisfaction, organizational commitment, and intentions to stay in or leave the Army, can be summarized as follows:

All total scales in the survey demonstrated high internal consistencies (alpha coefficients), ranging from 0.85 to 0.97; and subscales from .66 to .94.

Factor analyses of items within the eight motivational scales and the importance scale revealed theoretically meaningful and interpretable subscales of the competence and control constructs.

Several of the empirically defined subscales were significantly related to the retention-related criteria of intentions to stay in or leave the Army and reported decisions to stay or leave, accounting for between 12% and 16% of the adjusted variance, and with state variables tending to be better predictors than trait variables.

There were low interrelationships between the primary motivational subscales and ASVAB scores, which were also related to the reenlistment criterion, indicating that these variables contribute unique variance to the prediction of retention-related criteria.

Taken together, these findings are interpreted as extremely positive and encouraging with respect to the Phase I goal of establishing sound psychometric properties for the battery. Furthermore, it would be expected that enhanced predictive validity would result from additional validation studies with the battery. For example, increasing the item pool for subscales with fewer than 4 items that were shown to be related to the criterion variables and exploring potential non-linear relationships between the motivational subscales and criterion variables are approaches that may significantly improve the battery's predictive validity.

While it is to be expected that the findings of the present multiple regression analyses can be expected to shrink upon cross validation, it should also be pointed out that other factors may improve the relationships. For example, the correlation between intention to leave and actually leaving has been shown to be less than perfectly reliable (Motowidlo & Lawton, 1984). The present study was not able to use as a criterion actually leaving and if the correction for attenuation formula (Guilford, 1954, p. 400) is applied to the unreliabilities of both the predictors and criterion, the relations obtained are likely to be underestimates of the variance accounted for. Therefore, using a more valid criterion, ASVAB and motivational variables could account for more variance in the reenlistment decision than is reported here.

Implications for Future Research

The large expenditures associated with military selection, training and retention justifies a continual development effort to make the processes more economic. The high attrition during training, in some programs as much as 1 in 3 of all incoming persons, implies that retention of persons who are successful can have long term payoff. Presently DOD is suffering a serious shortage of trained personnel and several methods are proposed to serve as inducements to stay to the individual (Budahn, 1986) and recently to include families (Nogami, 1986). The conclusion that the pool of military-age youth will decline in the late 1980's (Merriman & Chatelier, 1981), and that continuing employment opportunities will exist outside the military for those who comprise the principle recruiting market, underscores the importance of identifying motivational variables related to Army career decisions that can potentially be used to maximize intervention on prediction efforts. Improved validity of attrition, not necessarily less of it, is to be sought.

One promising approach to reducing attrition is to recruit and retain soldiers motivated to stay and perform effectively in Army career specialties. Motivation to choose particular careers or employment opportunities is a complex phenomenon comprised of a host of underlying factors that contribute to the rationale or reasons that individuals give for their career choices, as well as the internal processes (values, beliefs, expectations, perceptions) and personality variables (tendencies and predispositions to exhibit particular behaviors) underlying the reasons given (cf., Pomarolli, 1966a,b; Pomarolli & Ambler, 1966; Doll, 1971). The concept of motivation is, itself, complex and dynamic in nature and is used to refer both globally to the large class of nonacademic reasons given for particular career decisions and more specifically to the internal drive state or impetus for these choices (McCombs, 1984). Efforts to predict motivational phenomena thus face the challenge of not only identifying the complex set of underlying motivational factors and variables related to employment decision making, but also with identifying the dynamic interrelationships between these factors and variables as a function of different individual or situational characteristics.

Much of the research with these variables has been disappointing with respect to their ability to discriminate students who drop from those who are successful or who leave for other reasons. For example, the research of Bucky and his colleagues has indicated some significant but small differences between students who drop and completer groups in trait and state anxiety (Bucky & Spielberger, 1971; Bucky, Spielberger, & Bale, 1970); some indication that attritions differ from completers on measures of satisfaction, optimism, and perceptions that their psychological needs are being met (Bucky & Burd, 1970); and minor differences between attrition and completers on the 18 scales of the California Personality Inventory (Bucky, 1971). The attrition often resembles the failure in terms of performance, although there is an obvious "chicken/egg" problem of interpretation. That is, does an individual leave an organization because of poor motivation or does he lose interest because of low ability and poor performance. It is probably a reciprocal relationship not unidirectional.

In the general field of motivation theory, substantial progress has been made within the last decade in identifying variables underlying motivation.

Much of this progress can be attributed to the emphasis in this research on understanding internal thought processes and cognitions that mediate behavioral outcomes, including individuals' perceptions, expectations, attentional processes, motivations, understandings, beliefs, attributes, strategies, and metacognitive processes (Wittrock, 1978, in press). Although Ambler and Smith (1974) recommend that measures of motivation factors should be studied for their predictive utility, applications of such an approach does not appear to be pursued widely. Issues raised in the '60s' about fairness in testing (Bersoff, 1981) and the urge to employ job samples may have stifled research in this area. Thus, a refinement in our understanding of underlying motivational variables related to employment decision making as well as refinements in the criterion measures are necessary for improving the prediction of those likely to remain in Army careers.

The findings of the present study imply certain opportunities are feasible. Specifically, the demonstration of reliable measurement of primary motivational constructs with face and construct validity have been shown empirically to be largely unique from other widely used basic capability measures. This suggests their use as predictors of reenlistment decision making which could perhaps also make differing predictions depending on MOS. One opportunity that such a finding presents is that of an interactive career advisory system. Initially, this system could be developed using the motivational constructs with the later plan to incorporate ability data (e.g., ASVAB), grades, biodata, family issues, etc as appropriate and as additional validation results became available.

Each MOS has its unique set of demands in control and competency while each soldier carries with him/her their own constellation of primary motivators as they relate to control and competency. With further research of the primary motivational scales it would be possible to develop an MOS assignment capability based upon the various MOS control/competency demands and the soldier's individual primary motivational characteristics. Basically such an approach would follow the model originally developed by the U.S. Navy Aviation Psychology Group in Pensacola, Florida, (Berkshire, Wherry & Shoenberger, 1965) whereby various prediction equations were available at different points in the training program to allow for a probability statement of pass-fail in any one of the three training pipelines. These prediction equations were based upon multiple regression analyses.

It would appear likely that a similar approach could be developed for each MOS or for each category of MOS. Project A, presently being sponsored by the Army Research Institute (Hoffman & Ford, 1986) has already completed such a categorization of MOS. The development of such an MOS assignment system would require the development of a series of multiple regression equations in which both the primary motivational scales and the ASVAB scales are considered for optimum weighting. Given the state of art of computer systems it is clear that these equations could be updated on a continuing basis. The operational use of such a system would entail the career advisor having available a set of MOS assignment (predictor) equations with which he could advise a soldier as to the MOS most appropriate given all the other constraints that might be impinging on the decision at the time. This decision might be at the beginning of the first enlistment or later in which a change of MOS is being considered.

A second area of research that deserves consideration is that of training intervention. While this area is not as clear as the MOS assignment area it may have important implications. Basically the training intervention approach would involve the identifying of a soldier who is perceived by the Army as being highly desirable but, because of mismatches between primary motivations of competency and/or control and those required in his or her job, is considering not to reenlist. Can the perception of competency and control be enhanced through a training intervention similar to that of training an individual to enhance their self esteem? If such training can in fact be developed, the Army would increase its flexibility of MOS assignment and increase the retention rate.

Subsidiary Findings

It should be pointed out that in the present study the first administration was probably taken more conscientiously throughout by the sample of enlistees. Because of the constraints of time, the second administration was taken either the next day or the same day. In our opinion, subjecting individuals to two lengthy administrations so close together in time may have introduced uncontrolled sources of error into the data because their responses on the second administration may have been less thoughtful than on the first administration. Evidence of this is the increased variability from the second exposure and slightly lower mean score. It is expected that based on the high alpha coefficients for the first day, higher test/retest reliabilities could be expected if either a slightly shorter testing time or more widely spaced second administrations were employed in Phase II. This we hope to accomplish.

It was observed during the interviews that a consistent complaint was from the air crew maintenance MOS. This MOS contained a large number of people who had gone through a rather rigorous training program which in their opinion was totally irrelevant to the job they were assigned. They were disgruntled and were opting to get out on that basis. Several of these people were, in fact, at the top of their classes and during the interview it was observed that these people were competent and felt in control of what they were doing but because the nature of what they were doing was dissatisfying to them, were electing to get out. Because it was necessary to group individuals from different MOS's, even though both competency and control could be expected to interact with different MOS's, it is possible that correlation coefficients could have been higher in this study if there were a rational way to covary these factors. We hope to make this prospect a part of the Phase II work. It is possible that differences in ASVAB or motivational test scores between the staying versus completion groups which are negative (the "better" opt to leave) may signal the requirement of interventions by U. S. Army in specific MOS's.

REFERENCES

Ambler, R. K., & Smith, M. J. (1974). Differentiating aptitude factors among current aviation specialties (NAMRL-1207). Pensacola, FL: Naval Aerospace Medical Research Laboratory. (NTIS No. AD A003033)

Arnold, J. J., & Feldman, D. C. (1982). A multivariate analysis of the determinants of job turnover. Journal of Applied Psychology, 67(3), 350-360.

Bandura, A. (1982). The self and mechanisms of agency. In J. Suls (Ed.), Psychological perspectives on the self (Vol. I). Hillsdale, NJ: Lawrence Erlbaum.

Bandura, A. (1984). Representing personal determinants in causal structures. Psychological Review, 91, 508-11.

Baudura, A. (1986). Social foundations of thought and action: A social-cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.

Berkshire, J. R., Wherry, R. J., Jr., & Shoenberger, R. W. (1965). Secondary selection in naval aviation training. Educational and Psychological Measurement, 25, 191-198.

Bersoff, D. N. (1981). Testing and the law. American Psychologist, 36, 1047-1056.

Booth, R. F., Holberg, A. L., & Webster, E. G. (1976). Work role motivation as a predictor of success in Navy paramedical training. Military Medicine, 141(3), 183-187.

Booth, R. F., Webster, E. G., & McNally, M. S. (1976). Schooling, occupational motivation, and personality as related to success in paramedical training. Public Health Reports, 91(6), 533-537.

Borman, W. C., Rossee, R. L., & Abrahams, N.M. (1980). An empirical construct validity approach to studying predictor-job performance links. Journal of Applied Psychology, 65(6), 662-671.

Bucky, S. F., & Burd, J. (1970, September). Need satisfaction in the identification of the DOR. Pensacola, FL: Naval Aerospace Medical Research Laboratory.

Bucky, S. F. (1971, January). The California Psychological Inventory given to incoming AOC's and DOR's with normal and "ideal" instructions. Pensacola, FL: Naval Aerospace Medical Research Laboratory.

Bucky, S. F., & Spielberger, C. D. (1971). State and trait anxiety in student naval aviator who voluntarily withdraws from flight training (NAMRL 1132). Pensacola, FL: Naval Aerospace Medical Research Laboratory.

Bucky, S. F., Spielberger, C. D., & Bale, R. M. (1970). State and trait anxiety in student naval aviators (NAMRL 1125). Pensacola, FL: Naval Aerospace Medical Research Laboratory.

Budahn, P. J. (1986). 'High-Tech' Manpower gap grows in military. Navy Times (28 July).

Butler, R. P., Lardent, C. L., & Miner, J. B. (1983). A motivational basis for turnover in military officer education and training. Journal of Applied Psychology, 68(3), 496-506.

Cervone, D. (1986, August). Availability biases, self-efficacy, judgments, and performance motivation. Paper presented at the annual meeting of the American Psychological Association, Washington, D.C.

Chan, F., Karbowski, J., Monty, R. A., & Perlmutter, L. C. (1986, April). Performance as a source of perceived control. (Technical Memorandum 4-86). Aberdeen Proving Ground, MD: U.S. Army Human Engineering Laboratory.

Cronbach, L. J. (1951) Coefficient alpha and the internal structure of tests. Psychometrika, 16, 297-334.

Dailey, R. C. (1979). Locus of control, task attributes, and job performance. Perceptual and Motor Skills, 49, 489-490.

Doll, R. E. (1971). Early aptitude--achievement discrepancies as predictors of later voluntary withdrawal from Naval aviation training (NAMRL-1134). Pensacola, FL: Naval Aerospace Medical Research Laboratory.

Dunlap, W. P., Bittner, A. C., Jr., Jones, M. B., & Kennedy, R. S. (1986). Factor analysis of composite scores from the Armed Services Vocational Aptitude Battery (ASVAB). Paper presented at the 28th Annual Military Testing Association Conference, Mystic, CT.

Eccles, J. (1983). Expectancies, values, and academic behaviors. In J. T. Spence (Ed.), Achievement and achievement motives: Psychological and sociological approaches. San Francisco: W. H. Freeman and Company.

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behavior: An introduction to theory and research. Reading, MA: Addison-Wesley.

Fleming, J. S., & Courtney, B. E. (1984). The dimensionality of self-esteem: II. Hierarchical facet model for revised measurement scales. Journal of Personality and Social Psychology, 46(2), 404-421.

Gordon, M. E., Philpot, J. W., Burt, R. E., Thompson, C. A., & Spiller, W. E. (1980). Commitment to the union: Development of a measure and an examination of its correlates. Journal of Applied Psychology Monographs, 65, 479-499.

Guilford, J. P. (1954). Psychometric Methods (pp. 400-402). New York: McGraw Hill.

Gunderson, E. K., & Johnson, J. C. (1965). Past experience, self-evaluation, and present adjustment. Journal of Social Psychology, 66, 311-321.

Harman, H. H. (Ed.) (1973, December). Proceedings: Toward the development of more comprehensive sets of personality measures. Symposium of the American Psychological Association, Montreal. Princeton, NJ: Educational Testing Service.

Harter, S. (1985). Processes underlying self-concept formation in children. In J. Suls & A. Greenwald (Eds.), Psychological perspectives on the self. Hillsdale, NJ: Lawrence Erlbaum.

Hicks, J. M., & Nogami, G. Y. (1984, July). Counter-attrition in the United States Armed Forces (Research Note 84-112). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.

Hoffman, R. G., & Ford, P. (1986, November). Estimates of task parameters for test and training development. Paper presented at the Meeting of the Military Testing Association, Mystic, CT.

Hoyle, R. H. (1986, August). Factor analytic study of the dimensionality of self-esteem. Paper presented at the annual meeting of the American Psychological Association, Washington, D.C.

Hrebniak, L. G., & Alutto, J. A. (1972). Personal and role related factors in the development of organizational commitment. Administrative Science Quarterly, 17, 555-572.

Jepsen, D. A. (1983). Career decision-making. In L. Harmon (Ed.), The individual's use of information in career development: From cognitive to computers. Columbus, OH: National Center for Research in Vocational Education, Ohio State University.

Kasperson, C. J. (1982). Locus of control and job dissatisfaction. Psychological Reports, 40, 823-826.

Kennedy, R. S. (1972). The relationship between habituation to vestibular stimulation and vigilance: Individual differences and subsidiary problems. Doctoral dissertation, University of Rochester, NY. (Also, NAMRL Monograph No. 20, Naval Aerospace Medical Research Laboratory, Pensacola, FL)

Landy, F. J., & Becker, W. S. (1985). Adaptive motivation theory. University Park, PA: Pennsylvania State University.

Lefcourt, H. M. (1984). Research with the locus of control construct (Vol. 1). New York: Academic Press, Inc.

Lefcourt, H. M. (1982). Locus of control: Current trends in theory and research (2nd Ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Lyons, T. F. (1971). Role clarity, need for clarity, satisfaction, tension, and withdrawal. Organizational Behavior and Human Performance, 6, 99-110.

Manderlink, G., & Harackiewicz, J. M. (1984). Proximal versus distal goal setting and intrinsic motivation. Journal of Personality and Social Psychology, 47(4), 918-928.

Markus, H., & Sentis, K. (1982). The self in social information processing. In J. Suls (Ed.), Psychological perspectives on the self (Vol. 1, 41-70). Hillsdale, NJ: Lawrence Erlbaum.

Marsh, H. W., Parker, J., & Barnes, J. (1985). Multidimensional adolescent self-concepts: Their relationship to age, sex, and academic measures. American Educational Research Journal, 22(3), 422-444.

Martin, T. N., & O'Laughlin, M. S. (1984). Predictors of organizational commitment: The study of part-time army reservists. Journal of Vocational Behavior, 25, 270-283.

McCombs, B. L. (1984). Processes and skills underlying continuing intrinsic motivation to learn: Toward a definition of motivational skills training interventions. Educational Psychologist, 19(4), 199-218.

McCombs, B. L. (in press). The role of the self-system in self-regulated learning. Contemporary Educational Psychology.

Merriman, S. C., & Chatelier, P. R. (1981). Impact of the Department of Defense Science and Technology Program on training and personnel systems technology. Washington, DC: Office of Environmental and Life Sciences. (NTIS No. AD A103382)

Meyer, J. P., & Allen, N. J. (1984). Testing the "side-bet theory" of organizational commitment: Some methodological considerations. Journal of Applied Psychology, 69, 372-378.

Mischel, W. (1977). On the future of personality measurement. American Psychologist, 32(4), 246-254.

Motowidlo, S. J., & Lawton, G. W. (1984). Affective and cognitive factors in soldiers' reenlistment decision. Journal of Applied Psychology, 69(1), 157-166.

Mowday, R. T., Koberg, C. S., & McArthur, A. W. (1984). The psychology of withdrawal process: A cross-validation test of Mobley's model of turnover in two samples. Academy of Management Journal, 27, 79-84.

Mowday, R. T., Porter, L. M., & Steers, R. M. (1982). Employee-organization linkages: The psychology of commitment, absenteeism, and turnover. New York: Academy Press.

Mowday, R. T., Steers, R. M., & Porter, L. M. (1979). The measurement of organizational commitment. Journal of Vocational Behavior, 14, 224-227.

Nogami, G. Y. (Chair). (1986, August). Theoretical model for military family and retention research. Symposium conducted at the 94th Annual Convention of the American Psychological Association, Washington, DC.

Nyquist, L. V. (1986, August). The dynamic self-concept: Cognitive and behavioral response to challenge. Paper presented at the annual meeting of the American Psychological Association, Washington, D.C.

Palenzuela, D. L. (1984). Critical evaluation of locus of control: Towards a reconceptualization of the construct and its measurement. Psychological Reports, 54, 683-709.

Paris, S. G., & Cross, D. R. (1983). Ordinary learning: Pragmatic connections among children's beliefs, motives, and actions. In J. Bisanz, G. L. Bisanz, & R. Kail (Eds.), Learning in children: Progress in cognitive development research, New York: Springer-Verlag.

Paris, S. G., Lipson, M. Y., & Wixson, K. K. (1983). Becoming a strategic reader. Contemporary Educational Psychology, 8, 293-316.

Paris, S. G., Newman, R. S., & Jacobs, J. E. (1985). Social contexts and functions of children's remembering. In M. Pressley & C. J. Brainerd (Eds.), Cognitive learning and memory in children. New York: Springer-Verlag.

Pervin, L. A. (1985). Personality: Current controversies, issues, and directions. Annual Review of Psychology, 36, 83-114.

Pomarolli, R. S. (1966a). Perceptions and attitudes of aviators toward voluntary withdrawal from flight training (Report No. 66-4). Pensacola, FL: Naval Aerospace Medical Research Laboratory. (NTIS No. AD A635602)

Pomarolli, R. S. (1966b). Psychological factors in voluntary withdrawal from flight training (Report No. 66-2). Pensacola, FL: Naval Aerospace Medical Research Laboratory. (NTIS No. AD A634000)

Pomarolli, R. S., & Ambler, R. K. (1966). Voluntary withdrawal from primary flight training as a function of the individual flight instructor. Aerospace Medicine, 37 (8), 810-812.

Rogers, T. B., Kuiper, N. A., & Kirker, W. S. (1977). Self-reference and the encoding of personal information. Journal of Personality and Social Psychology, 35(9), 677-688.

Shavelson, R. J., & Bolus, R. (1982). Self-concept: The interplay of theory and methods. Journal of Educational Psychology, 74, 3-17.

Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Validation of construct interpretations. Review of Educational Research, 46, 407-441.

Spielberger, C. D., & Diaz-Guerrero, R. (Eds.) (1983). Cross-cultural anxiety (Vol. 2). New York: Hemisphere/McGraw-Hill.

Spielberger, C. D., et al. (1983). Manual for the state-trait anxiety inventory. Palo Alto, CA: Consulting Psychologists Press, Inc.

Weiner, B. (1976). Attribution theory, achievement motivation, and the educational process. Review of Educational Research, 42, 201-215.

Weiner, B. (1980). The role of affect in rational (attributional) approaches to human motivation. Educational Researcher, 9(7), 4-11.

White, R. W. (1959). Motivation reconsidered: The concept of competence. Psychological Review, 66, 297-333.

Wittrock, M. C. (1978). The cognitive movement in instruction. Educational Psychologist, 13, 15-29.

Wittrock, M. C. (1986). Student thought processes. In M. C. Wittrock (Ed.), Handbook of research on teaching (3rd ed.). New York: McMillan.

Wittrock, M. C. (in press). Student thought processes. In M. C. Wittrock (Ed.), Handbook of research on teaching (3rd ed.). New York: McMillan.

APPENDIX A:
MOTIVATIONAL SCALES DEVELOPMENT PROCEDURES

MOTIVATIONAL SCALES DEVELOPMENT PROCEDURES

Introduction

This appendix provides documentation of the procedures used to construct the global and domain-specific, trait and state competence and control scales (Scales 1 through 8) included in the Army Retention Survey. Also included is a description of the development procedures used in the construction of the importance rating scale (Scale 9) and the job satisfaction scale (Scale 10). In general, these procedures consisted of reviewing available measures of the constructs of items, selecting items that tapped these constructs, revising or adapting items as necessary, and writing new items as appropriate. The following sections describe the particular existing measures that were used in the scale development process for each of the classes of scales in the survey. It should be noted that all scales were scored such that high scores indicated high competence, control, importance, or satisfaction. Negatively expressed items were reversed in the scoring procedure.

Motivational Scales

Control measures. Items for the global and domain-specific versions of the control scales were adapted from the following existing measures:

- o Diamond's (1985) Career Maturity Assessment Scale
- o Spielberger's (1983) State-Trait Anxiety Inventory
- o Rotter's (1966) Internal-External Scale
- o Bialer's (1961) Locus of Control Questionnaire
- o Crandall, Katkovsky, and Crandall's (1965) Intellectual Achievement Responsibility Questionnaire
- o Dean's (1969) Alienation Scale (s)
- o James' (1957) Internal-External Locus of Control Scale
- o Nowicki and Strickland's (1973) Locus of Control Scale
- o Reid and Ware's (1974) Three-Factor Internal-External Scale
- o Jones' (1955) Pensacola Z-Survey

Items from these scales were reviewed with respect to whether they tapped the defined underlying constructs and where appropriate, separate global and domain-specific (job-related) versions were created. Additional items were generated such that at least ten times per the three defined constructs for the control dimension were available. Trait vs. state versions of the global and domain-specific scales were developed to contain the same items, but with different directions to reflect how subjects generally felt vs. felt right now, respectively.

Competence measures. As with the control measures, items for the global and domain-specific scales were adapted from items contained in a number of existing measures. These measures included:

- o Coopersmith's (1967) Self-Evaluation Inventory
- o Reosenberg's (1965) Self Esteem Scale
- o Harter's (1978) Adolescent Competence Scale

- o Harter's (1982) Concerns Scale
- o Harter's (1984) Social Support Scale
- o McCombs' (1983) Self-Efficacy Scale
- o McCombs' (1983) Motivational Skills Testing Battery
- o Martin's (1968) Self Perception Inventory
- o Diamond's (1985) Career Maturity Assessment Scale
- o Spielberger's (1983) State-Trait Anxiety Inventory

In the process similar to that used with the control measures, items from the preceding scales were reviewed in light of their conceptual relationships with the underlying constructs of interest. Separate global and domain-specific versions were created, and additional items generated to insure that there were at least ten items per the four defined constructs for the competence dimension. Again, trait and state versions were developed to contain the same items, but with differential trait vs. state directions.

Importance measures. Items for this scale were selected from the What's Important to Me measure that is part of McCombs' (1983) Motivational Skills Testing Battery that has been used in research with Air Force Trainees (McCombs, 1982). The selection criterion was one in which items that were conceptually related to the importance of being competent and the importance of being in control were identified. A trait response format was then used for the resulting 30-item scale.

Job satisfaction measure. Items from the Minnesota Satisfaction Questionnaire (Weis, Dawis, England, & Lofquist, 1967) were selected that were part of six of 20 subscales. The specific subscales were ability utilization, achievement, advancement, creativity, recognition, and responsibility. Each of these subscales has five items, resulting in a 30-item job satisfaction measure with established reliability and validity. The subscales chosen were those that were conceptually related to the competence and control constructs. The response format of the original questionnaire was maintained, with slight modifications made to the directions such that they matched other scales in the battery.

A copy of the complete Army Retention Survey which includes the scales described here can be found in Appendix B.

Appendix A References

- Bialer, I. (1961). Conceptualization of success and failure in mentally retarded and normal children. Journal of Personality, 29, 303-320.
- Buhrmester, D., & Harter, S. (1982). Manual for the Children's School Concerns Scale. Unpublished manuscript, University of Denver.
- Coopersmith, S. (1967). The antecedents of self-esteem. San Francisco: W. H. Freeman.
- Crandall, V. S., Katkovsky, W., & Crandall, V. J. (1965). Children's beliefs in their control of reinforcements in intellectual academic behaviors. Child Development, 36, 91-109.
- Dean, D. G. (1969). Dynamic social psychology: Toward appreciation and replication. New York: Random House.
- Diamond, E. E. (1985, July). Development of the Career Maturity Assessment.
- Harter, S. (1978). Effectance motivation reconsidered: Toward a developmental model. Human Development, 1, 34-64.
- Harter, S. (1984). Supplementary description of the Self-Perception Profile for Children: Revision of the Perceived Competence Scale for Children. Unpublished manuscript, University of Denver.
- Harter, S. (1984). The Social Support Scale for Children. Manual in preparation, University of Denver.
- James, W. H. (1957). Internal versus external control of reinforcement as a basic variable in learning theory. Unpublished doctoral dissertation, Ohio State University.
- Martin, W. T. (1968). Self Perception Inventory: A new test of personality. Psychological Reports, 23, 961-962.
- McCombs, B. L. (1982). Transitioning learning strategies research into practice: Focus on the student in technical training. Journal of Instructional Development, 5(2), 10-17.
- McCombs, B. L. (1983). The Motivational Skills Testing Battery. Unpublished manuscript, University of Denver.
- McCombs, B. L. (1983). The development of a measure of self-efficacy: The How I Feel About Myself Scale. Unpublished manuscript, University of Denver.

- Nowicki, S., & Strickland, B. (1973). A locus of control scale for children. Journal of Consulting and Clinical Psychology, 40, 148-154.
- Reid, D., & Ware, E. E. (1974). Multidimensionality of internal versus external control: Addition of a third dimension and non-distinction of self versus others. Canadian Journal of Behavioral Science, 6, 131-142.
- Rosenberg, M. (1965). Society and the adolescent child. Princeton, NJ: Princeton University Press.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 80 (Whole No. 609).
- Spielberger, C. D. (1983). Manual for the State-Trait Anxiety Inventory. Palo Alto, CA: Consulting Psychologists Press, Inc.

APPENDIX B:
ARMY RETENTION SURVEY

ARMY RETENTION SURVEY

Purpose of Survey

The Essex Corporation in Orlando (under contract to the Army Research Institute) has been asked to help the Army identify reasons why good soldiers leave the Army--don't re-enlist--and why good soldiers decide to stay. It is critical to our national defense that all branches of the military service keep as many of their good people as possible. The Army, in particular, is concerned about what they can do to motivate more good soldiers to re-enlist and stay in the Army. So, you are part of a very important project.

What you'll be asked to do today is to fill out some questionnaires that ask you about your attitudes and feelings related to why you may have decided to re-enlist or not re-enlist in the Army. The results of these questionnaires will be kept completely confidential. Thank you in advance for your help on this project.

General Directions for Survey

This survey includes 14 separate questionnaires. Each questionnaire has its own directions. Before beginning each questionnaire, it is important for you to read the directions carefully to be sure you understand how you are to respond. Once you begin each questionnaire, read each item carefully. Do not take too much time on any one question; your first response is usually the best. Please answer each and every question. Please be honest about your answers. Only with your honest answers can this survey be used to help other soldiers in the Army.

You will see some of the same items on more than one questionnaire. The directions for responding to these items will be different, however. That is why it is extremely important that you read the directions carefully before you begin. When you finish each questionnaire, go on to the next one. When you have finished all questionnaires in this survey, notify the proctor.

NOTE

Public Law 93-573, called the Privacy Act of 1974, requires that you be informed of the purpose and uses to be made of the information that is collected. The Department of the Army may collect information requested in the Army Retention Survey under the authority of 10 United States Code 137.

Providing information in this survey is voluntary. Failure to respond to any particular questions will not result in any penalty for the respondent. The information collected in this survey will be used to evaluate and improve military personnel and retention policies. The information will be used for research and analysis purposes only. The Army Research Institute, under guidance of the Deputy Chief of Staff for Personnel, has primary research and analysis responsibility.

ARMY RETENTION SURVEY

Background Information

Today's Date: _____

Social Security #: _____

Sex: _____

Grade: _____

Length of stay in Army: _____

Last grade completed in school: _____

Primary MOS: _____

Duty MOS: _____

Which term of enlistment are you now serving? (Please circle one)

- a. 1st enlistment
- b. 2nd enlistment
- c. 3rd or later enlistment

What is the term of your current enlistment? (Please circle one)

- a. 2 years
- b. 3 years
- c. 4 years or longer

How long have you been in your present duty MOS? _____

Have you made a re-enlistment decision? Yes No (Circle one)

If yes, what is your decision? (Please circle one)

- a. To re-enlist for the same MOS
- b. To re-enlist for a different MOS
- c. To not re-enlist

SELF-CONTROL/INTERNAL LOCUS OF CONTROL (GLOBAL) (Trait Form)

Directions:

A number of statements are given below which people have used to describe their beliefs and evaluations of themselves. There are no right or wrong answers. Read each statement carefully and then circle the answer that best describes how you generally feel.

	<i>Almost Never</i>	<i>Sometimes</i>	<i>Often</i>	<i>Almost Always</i>
1. I make my own decisions.	1	2	3	4
2. I feel confused about what's going to happen to me.	1	2	3	4
3. When unfortunate things happen to me it is due to bad luck.	1	2	3	4
4. I am indecisive.	1	2	3	4
5. My misfortunes result from the mistakes that I make.	1	2	3	4
6. Trusting to fate is not as good as making a decision to take a definite course of action.	1	2	3	4
7. Becoming a success is a matter of hard work; luck has little or nothing to do with it.	1	2	3	4
8. When I make plans, I am confident that I can make them work.	1	2	3	4
9. In my case, getting what I want has little or nothing to do with luck.	1	2	3	4
10. I make decisions easily.	1	2	3	4
11. In much of life, I am a victim of forces I can neither understand nor control.	1	2	3	4
12. By taking an active part in my life decisions, I can control most events.	1	2	3	4
13. Most people don't realize the extent to which their lives are controlled by accidental happenings.	1	2	3	4
14. There really is no such thing as "luck."	1	2	3	4
15. Most misfortunes are the result of low ability, lack of effort, laziness, or all three.	1	2	3	4

SELF-CONTROL/INTERNAL LOCUS OF CONTROL (GLOBAL) (Continued)
(Trait Form)

	<i>Almost Never</i>	<i>Sometimes</i>	<i>Often</i>	<i>Almost Always</i>
16. I have little influence over the things that happen to me.	1	2	3	4
17. My successes and failures are my own doing.	1	2	3	4
18. I have little control over the direction my life is taking.	1	2	3	4
19. I can get people to do what I ask.	1	2	3	4
20. I can succeed at most things if I try hard enough.	1	2	3	4
21. We might just as well make many of our decisions by flipping a coin.	1	2	3	4
22. I don't believe a person can really be a master of his fate.	1	2	3	4
23. I can figure out problems that other people have trouble with.	1	2	3	4
24. I feel I don't have enough control over the direction my life is taking.	1	2	3	4
25. I believe that being smart has more to do with success than being lucky.	1	2	3	4
26. I feel I can control what I am doing.	1	2	3	4
27. Being a success is mostly a matter of hard work.	1	2	3	4
28. I impulsively do things which I know I should not do.	1	2	3	4
29. People don't realize how much they personally determine their own outcomes.	1	2	3	4
30. I don't depend on luck when I decide to do something.	1	2	3	4
31. Self-regulation of one's behavior is always possible.	1	2	3	4
32. I can cope with the ups and downs of life.	1	2	3	4
33. I am a self-sufficient person.	1	2	3	4
34. It makes no sense to have opinions about issues over which I have no control.	1	2	3	4

SELF-CONTROL/INTERNAL LOCUS OF CONTROL (GLOBAL) (Continued)
(Trait Form)

	Almost Never	Sometimes	Often	Almost Always
35. I look for new ways to solve problems.	1	2	3	4
36. I feel more comfortable when I use tried-and-true methods to solve problems.	1	2	3	4
37. I try to be creative in my approach to things.	1	2	3	4
38. I like to plan and prepare for my future.	1	2	3	4
39. Once I decide to do something, I can carry it through.	1	2	3	4
40. I believe I am responsible for myself.	1	2	3	4

SELF-EFFICACY/SELF-WORTH JUDGMENTS (GLOBAL)
(Trait Form)

Directions:

A number of statements are given below which people have used to describe their beliefs and evaluations of themselves. There are no right or wrong answers. Read each statement carefully and then circle the answer that best describes how you generally feel.

	<i>Almost Never</i>	<i>Sometimes</i>	<i>Often</i>	<i>Almost Always</i>
1. I keep working on difficult things even when I believe they might be hopeless.	1	2	3	4
2. I know how to go after what I want.	1	2	3	4
3. Even when I make decisions, I am not sure they are the right ones.	1	2	3	4
4. I don't have much confidence in my abilities.	1	2	3	4
5. I don't believe I'm overestimating or underestimating my abilities.	1	2	3	4
6. I like to be sure I will be able to do something well before I even try doing it.	1	2	3	4
7. I feel that I have failed more than the average person.	1	2	3	4
8. I feel satisfied with myself.	1	2	3	4
9. I feel like a failure.	1	2	3	4
10. I lack self-confidence.	1	2	3	4
11. I feel inadequate.	1	2	3	4
12. I feel self-confident.	1	2	3	4
13. I'm pretty sure of myself.	1	2	3	4
14. I have a low opinion of myself.	1	2	3	4
15. I feel I am a person of worth.	1	2	3	4
16. I am able to do things better than most people.	1	2	3	4
17. I seem to be about as capable and smart as most others around me.	1	2	3	4

SELF-EFFICACY/SELF-WORTH JUDGMENTS (GLOBAL) (Continued)
(Trait Form)

	Almost Never	Sometimes	Almost Often	Always
18. I like the kind of person I am.	1	2	3	4
19. I think I am intelligent.	1	2	3	4
20. I am proud of my skills and abilities.	1	2	3	4
21. I am happy with myself most of the time.	1	2	3	4
22. I am able to do most things as well as other people.	1	2	3	4
23. I can do just about anything I set my mind to do.	1	2	3	4
24. When things don't go well, I don't give up because I know I can reach my goal eventually.	1	2	3	4
25. I am not confident in my ability to succeed at whatever I try to do.	1	2	3	4
26. I feel like I am in control of my life.	1	2	3	4
27. I feel competent.	1	2	3	4
28. When I am feeling worried, there is little I can do or think to change my feelings.	1	2	3	4
29. I feel I am a person of worth, and at least on an equal basis with others.	1	2	3	4
30. I am inclined to feel that I am a failure.	1	2	3	4
31. I take a positive attitude toward myself.	1	2	3	4
32. I wish I could have more respect for myself.	1	2	3	4
33. I feel disappointed with myself.	1	2	3	4
34. I often fail to do things as well as I would like.	1	2	3	4
35. When I set a goal, I usually meet it.	1	2	3	4
36. Even though there are things I can't do well, I believe in myself.	1	2	3	4

SELF-EFFICACY/SELF-WORTH JUDGMENTS (GLOBAL) (Continued)
(Trait Form)

	<i>Almost Never</i>	<i>Sometimes</i>	<i>Almost Often</i>	<i>Always</i>
37. When things go wrong, I am good at making them right again.	1	2	3	4
38. I handle my problems very well.	1	2	3	4
39. For me, anything is possible if I believe in myself.	1	2	3	4
40. I worry about not being able to do things as well as others.	1	2	3	4
41. I know how to go after what I want.	1	2	3	4
42. I am self-sufficient.	1	2	3	4
43. I have some faults but they don't bother me.	1	2	3	4
44. I don't care what other people think of me.	1	2	3	4
45. I profit from any past mistakes I have made.	1	2	3	4
46. I am a worthwhile person.	1	2	3	4
47. I don't put off things until later.	1	2	3	4
48. I get a lot of pleasure from learning about things.	1	2	3	4
49. When faced with a difficult problem, I know I can solve it if I try.	1	2	3	4
50. To keep feeling good about myself, I need to get a lot done and do it well.	1	2	3	4

SELF-CONTROL/INTERNAL LOCUS OF CONTROL (DOMAIN-SPECIFIC)
(Trait Form)

Directions:

A number of statements are given below which people have used to describe their beliefs about their jobs and evaluations of themselves on their jobs. There are no right or wrong answers. Read each statement carefully and then circle the answer that best describes how you generally feel.

	Almost Never	Sometimes	Almost Always	Often
1. Getting a good job is mostly a matter of luck and knowing the right people.	1	2	3	4
2. Getting promoted depends on how much ability you show on the job.	1	2	3	4
3. There is a direct connection between how hard I work and the promotions/successes I get.	1	2	3	4
4. When someone criticizes my performance at work, I feel there is nothing I can do about it.	1	2	3	4
5. I believe I can do whatever I want in my career.	1	2	3	4
6. It is difficult for me to make on-the-job decisions without asking someone first.	1	2	3	4
7. When I am rewarded for my performance, it is because I deserved it.	1	2	3	4
8. I believe I can change things I don't like about my job.	1	2	3	4
9. Job promotions come if your supervisor likes you, not because of the work you do.	1	2	3	4
10. It is frightening to have a lot of job responsibility.	1	2	3	4
11. There is little or nothing I can do to change the negative things about my job.	1	2	3	4
12. There is little chance for promotion on the job unless a person gets a break.	1	2	3	4
13. My job is so regimented, there's not much room for personal choice.	1	2	3	4
14. Getting a good job is mostly a matter of being lucky enough to be in the right place at the right time.	1	2	3	4

SELF-CONTROL/INTERNAL LOCUS OF CONTROL (DOMAIN-SPECIFIC) (Continued)
(Trait Form)

	<i>Almost Never</i>	<i>Sometimes</i>	<i>Often</i>	<i>Almost Always</i>
15. It's not who you know but what you know that really counts in getting ahead.	1	2	3	4
16. When I look at it carefully I realize it is impossible for me to have any really important influence over what happens to me in the military.	1	2	3	4
17. When I get a good job, it is a direct result of my own ability and/or motivation.	1	2	3	4
18. I enjoy having to rely on myself to solve problems in my job.	1	2	3	4
19. If I have a problem related to work, I can usually solve it myself.	1	2	3	4
20. I am responsible for most of the problems I have on the job.	1	2	3	4
21. When I don't perform well on the job, it's because I didn't try hard enough.	1	2	3	4
22. My successes at work are mostly due to my ability.	1	2	3	4
23. Getting ahead on the job depends on other people liking you.	1	2	3	4
24. Positive things that happen at work are mostly a matter of chance.	1	2	3	4
25. If people want good opportunities in their career, they have to depend on luck.	1	2	3	4
26. When I complete a job more quickly than others, it's because I am more capable than most people.	1	2	3	4
27. Being in the right place at the right time gets people the good jobs.	1	2	3	4
28. If I fail to do something well, it's because the task was too difficult.	1	2	3	4
29. The bad performance ratings I've gotten are due to unfair supervisors.	1	2	3	4
30. Most decisions about how well I do my job are made by people I respect.	1	2	3	4

SELF-EFFICACY/SELF-WORTH JUDGMENT (DOMAIN-SPECIFIC)
(Trait Form)

Directions:

A number of statements are given below which people have used to describe their beliefs about their jobs and evaluations of themselves on their jobs. There are no right or wrong answers. Read each statement carefully and then circle the answer that best describes how you generally feel.

	Almost Never	Sometimes	Often	Almost Always
1. It upsets me when others expect too much of me on the job.	1	2	3	4
2. It is hard for me to stay motivated on my job.	1	2	3	4
3. The kind of work that appeals to me most is work I'm not qualified to do.	1	2	3	4
4. My abilities are strong in the occupational areas I'm interested in.	1	2	3	4
5. I'm doing the best I can on my job.	1	2	3	4
6. I feel I made the wrong choice in my occupation.	1	2	3	4
7. I have the necessary skills and abilities to do well in my job.	1	2	3	4
8. I cannot complete my job tasks as quickly as others.	1	2	3	4
9. I often have trouble organizing my work so that I can get everything done.	1	2	3	4
10. I feel competent at my job.	1	2	3	4
11. I feel I'm not very productive in my work.	1	2	3	4
12. I consider myself to be a dedicated worker.	1	2	3	4
13. I am capable of doing my job well.	1	2	3	4
14. I have failed to do as well at my job as others.	1	2	3	4
15. I can easily adapt to new requirements on my job.	1	2	3	4
16. I accept my mistakes or poor performance on the job.	1	2	3	4
17. When faced with a difficult problem at work, I know I can solve it if I try.	1	2	3	4

SELF-EFFICACY/SELF-WORTH JUDGMENT (DOMAIN-SPECIFIC) (Continued)
(Trait Form)

	<i>Almost Never</i>	<i>Sometimes</i>	<i>Often</i>	<i>Almost Always</i>
18. To keep feeling good about myself on the job, I need to get a lot done and do it well.	1	2	3	4
19. Facing an unexpected problem or situation at work doesn't bother me a lot.	1	2	3	4
20. I feel stupid when I don't understand something about my job.	1	2	3	4
21. I am satisfied with my job skills and abilities.	1	2	3	4
22. I feel confident I can perform most tasks required of me on my job.	1	2	3	4
23. I know how to accomplish the jobs I have to do.	1	2	3	4
24. I like the way I handle my job responsibilities.	1	2	3	4
25. I feel disappointed with my performance on the job.	1	2	3	4
26. It is difficult for me to adjust to changes in my job tasks and responsibilities.	1	2	3	4
27. I feel I can handle any difficult situation that comes up at work.	1	2	3	4
28. I lack confidence in my ability to perform well in my job.	1	2	3	4
29. I feel I am a person of value to my professional field.	1	2	3	4
30. I am confident of my ability to succeed in my job.	1	2	3	4
31. I am proud of the way I handle difficult problems at work.	1	2	3	4
32. I lack confidence in my ability to be successful at new kinds of job tasks.	1	2	3	4
33. If difficult problems come up at work, I don't believe I can handle them as well as other people	1	2	3	4
34. I have the kinds of skills and abilities that are important in my job.	1	2	3	4

SELF-EFFICACY/SELF-WORTH JUDGMENT (DOMAIN-SPECIFIC) (Continued)
(Trait Form)

	<i>Almost Never</i>	<i>Sometimes</i>	<i>Often</i>	<i>Almost Always</i>
35. I am happy with the job skills and capabilities that I have.	1	2	3	4
36. I worry about not being able to perform my job as well as others.	1	2	3	4
37. I believe in myself even when I make mistakes in my job.	1	2	3	4
38. I have a positive attitude toward my job skills and abilities.	1	2	3	4
39. I know the steps I have to take to get ahead in my job.	1	2	3	4
40. I learn from the mistakes I make in my job.	1	2	3	4

SELF-CONTROL/INTERNAL LOCUS OF CONTROL (GLOBAL) (State Form)

Directions:

A number of statements are given below which people have used to describe their beliefs and evaluations of themselves. There are no right or wrong answers. Read each statement carefully and then circle the answer that best describes how true each statement is for you, right now, at this moment.

	Not At All	Moderately Somewhat	Very Much So	
1. I make my own decisions.	1	2	3	4
2. I feel confused about what's going to happen to me.	1	2	3	4
3. When unfortunate things happen to me it is due to bad luck.	1	2	3	4
4. I am indecisive.	1	2	3	4
5. My misfortunes result from the mistakes that I make.	1	2	3	4
6. Trusting to fate is not as good as making a decision to take a definite course of action.	1	2	3	4
7. Becoming a success is a matter of hard work; luck has little or nothing to do with it.	1	2	3	4
8. When I make plans, I am confident that I can make them work.	1	2	3	4
9. In my case, getting what I want has little or nothing to do with luck.	1	2	3	4
10. I make decisions easily.	1	2	3	4
11. In much of life, I am a victim of forces I can neither understand nor control.	1	2	3	4
12. By taking an active part in my life decisions, I can control most events.	1	2	3	4
13. Most people don't realize the extent to which their lives are controlled by accidental happenings.	1	2	3	4
14. There really is no such thing as "luck."	1	2	3	4
15. Most misfortunes are the result of low ability, lack of effort, laziness, or all three.	1	2	3	4

SELF-CONTROL/INTERNAL LOCUS OF CONTROL (GLOBAL) (Continued)
(State Form)

	Not At All	Somewhat	Moderately So	Very Much So
16. I have little influence over the things that happen to me.	1	2	3	4
17. My successes and failures are my own doing.	1	2	3	4
18. I have little control over the direction my life is taking.	1	2	3	4
19. I can get people to do what I ask.	1	2	3	4
20. I can succeed at most things if I try hard enough.	1	2	3	4
21. We might just as well make many of our decisions by flipping a coin.	1	2	3	4
22. I don't believe a person can really be a master of his fate.	1	2	3	4
23. I can figure out problems that other people have trouble with.	1	2	3	4
24. I feel I don't have enough control over the direction my life is taking.	1	2	3	4
25. I believe that being smart has more to do with success than being lucky.	1	2	3	4
26. I feel I can control what I am doing.	1	2	3	4
27. Being a success is mostly a matter of hard work.	1	2	3	4
28. I impulsively do things which I know I should not do.	1	2	3	4
29. People don't realize how much they personally determine their own outcomes.	1	2	3	4
30. I don't depend on luck when I decide to do something.	1	2	3	4
31. Self-regulation of one's behavior is always possible.	1	2	3	4
32. I can cope with the ups and downs of life.	1	2	3	4
33. I am a self-sufficient person.	1	2	3	4
34. It makes no sense to have opinions about issues over which I have no control.	1	2	3	4

SELF-CONTROL/INTERNAL LOCUS OF CONTROL (GLOBAL) (Continued)
(State Form)

	Not At All	Somewhat	Moderately So	Very Much So
35. I look for new ways to solve problems.	1	2	3	4
36. I feel more comfortable when I use tried-and-true methods to solve problems.	1	2	3	4
37. I try to be creative in my approach to things.	1	2	3	4
38. I like to plan and prepare for my future.	1	2	3	4
39. Once I decide to do something, I can carry it through.	1	2	3	4
40. I believe I am responsible for myself.	1	2	3	4

SELF-EFFICACY/SELF-WORTH JUDGMENTS (GLOBAL)
(State Form)

Directions:

A number of statements are given below which people have used to describe their beliefs and evaluations of themselves. There are no right or wrong answers. Read each statement carefully and then circle the answer that best describes how true each statement is for you, right now, at this moment.

Not At All
Somewhat
Moderately So
Very Much So

1. I keep working on difficult things even when I believe they might be hopeless.	1	2	3	4
2. I know how to go after what I want.	1	2	3	4
3. Even when I make decisions, I am not sure they are the right ones.	1	2	3	4
4. I don't have much confidence in my abilities.	1	2	3	4
5. I don't believe I'm overestimating or underestimating my abilities.	1	2	3	4
6. I like to be sure I will be able to do something well before I even try doing it.	1	2	3	4
7. I feel that I have failed more than the average person.	1	2	3	4
8. I feel satisfied with myself.	1	2	3	4
9. I feel like a failure.	1	2	3	4
10. I lack self-confidence.	1	2	3	4
11. I feel inadequate.	1	2	3	4
12. I feel self-confident.	1	2	3	4
13. I'm pretty sure of myself.	1	2	3	4
14. I have a low opinion of myself.	1	2	3	4
15. I feel I am a person of worth.	1	2	3	4
16. I am able to do things better than most people.	1	2	3	4
17. I seem to be about as capable and smart as most others around me.	1	2	3	4

SELF-EFFICACY/SELF-WORTH JUDGMENTS (GLOBAL) (Continued)
(State Form)

	<div style="display: flex; justify-content: space-around; text-align: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Not At All</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Somewhat</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Moderately So</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Very Much So</div> </div>			
18. I like the kind of person I am.	1	2	3	4
19. I think I am intelligent.	1	2	3	4
20. I am proud of my skills and abilities.	1	2	3	4
21. I am happy with myself most of the time.	1	2	3	4
22. I am able to do most things as well as other people.	1	2	3	4
23. I can do just about anything I set my mind to do.	1	2	3	4
24. When things don't go well, I don't give up because I know I can reach my goal eventually.	1	2	3	4
25. I am not confident in my ability to succeed at whatever I try to do.	1	2	3	4
26. I feel like I am in control of my life.	1	2	3	4
27. I feel competent.	1	2	3	4
28. When I am feeling worried, there is little I can do or think to change my feelings.	1	2	3	4
29. I feel I am a person of worth, and at least on an equal basis with others.	1	2	3	4
30. I am inclined to feel that I am a failure.	1	2	3	4
31. I take a positive attitude toward myself.	1	2	3	4
32. I wish I could have more respect for myself.	1	2	3	4
33. I feel disappointed with myself.	1	2	3	4
34. I often fail to do things as well as I would like.	1	2	3	4
35. When I set a goal, I usually meet it.	1	2	3	4
36. Even though there are things I can't do well, I believe in myself.	1	2	3	4

SELF-EFFICACY/SELF-WORTH JUDGMENTS (GLOBAL) (Continued)
(State Form)

	Not at All	Somewhat	Moderately So	Very Much So
37. When things go wrong, I am good at making them right again.	1	2	3	4
38. I handle my problems very well.	1	2	3	4
39. For me, anything is possible if I believe in myself.	1	2	3	4
40. I worry about not being able to do things as well as others.	1	2	3	4
41. I know how to go after what I want.	1	2	3	4
42. I am self-sufficient.	1	2	3	4
43. I have some faults but they don't bother me.	1	2	3	4
44. I don't care what other people think of me.	1	2	3	4
45. I profit from any past mistakes I have made.	1	2	3	4
46. I am a worthwhile person.	1	2	3	4
47. I don't put off things until later.	1	2	3	4
48. I get a lot of pleasure from learning about things.	1	2	3	4
49. When faced with a difficult problem, I know I can solve it if I try.	1	2	3	4
50. To keep feeling good about myself, I need to get a lot done and do it well.	1	2	3	4

SELF-CONTROL/INTERNAL LOCUS OF CONTROL (DOMAIN-SPECIFIC) (State Form)

Directions:

A number of statements are given below which people have used to describe their beliefs about their jobs and evaluations of themselves on their jobs. There are no right or wrong answers. Read each statement carefully and then circle the answer that best describes how true each statement is for you, right now, at this moment.

	Not At All	Somewhat	Moderately So	Very Much So
1. Getting a good job is mostly a matter of luck and knowing the right people.	1	2	3	4
2. Getting promoted depends on how much ability you show on the job.	1	2	3	4
3. There is a direct connection between how hard I work and the promotions/successes I get.	1	2	3	4
4. When someone criticizes my performance at work, I feel there is nothing I can do about it.	1	2	3	4
5. I believe I can do whatever I want in my career.	1	2	3	4
6. It is difficult for me to make on-the-job decisions without asking someone first.	1	2	3	4
7. When I am rewarded for my performance, it is because I deserved it.	1	2	3	4
8. I believe I can change things I don't like about my job.	1	2	3	4
9. Job promotions come if your supervisor likes you, not because of the work you do.	1	2	3	4
10. It is frightening to have a lot of job responsibility.	1	2	3	4
11. There is little or nothing I can do to change the negative things about my job.	1	2	3	4
12. There is little chance for promotion on the job unless a person gets a break.	1	2	3	4
13. My job is so regimented, there's not much room for personal choice.	1	2	3	4
14. Getting a good job is mostly a matter of being lucky enough to be in the right place at the right time.	1	2	3	4

SELF-CONTROL/INTERNAL LOCUS OF CONTROL (DOMAIN-SPECIFIC) (Continued)
(State Form)

	<div> <div>Not At All</div> <div>Moderately Somewhat</div> <div>Very Much So</div> </div>			
15. It's not who you know but what you know that really counts in getting ahead.	1	2	3	4
16. When I look at it carefully I realize it is impossible for me to have any really important influence over what happens to me in the military.	1	2	3	4
17. When I get a good job, it is a direct result of my own ability and/or motivation.	1	2	3	4
18. I enjoy having to rely on myself to solve problems in my job.	1	2	3	4
19. If I have a problem related to work, I can usually solve it myself.	1	2	3	4
20. I am responsible for most of the problems I have on the job.	1	2	3	4
21. When I don't perform well on the job, it's because I didn't try hard enough.	1	2	3	4
22. My successes at work are mostly due to my ability.	1	2	3	4
23. Getting ahead on the job depends on other people liking you.	1	2	3	4
24. Positive things that happen at work are mostly a matter of chance.	1	2	3	4
25. If people want good opportunities in their career, they have to depend on luck.	1	2	3	4
26. When I complete a job more quickly than others, it's because I am more capable than most people.	1	2	3	4
27. Being in the right place at the right time gets people the good jobs.	1	2	3	4
28. If I fail to do something well, it's because the task was too difficult.	1	2	3	4
29. The bad performance ratings I've gotten are due to unfair supervisors.	1	2	3	4
30. Most decisions about how well I do my job are made by people I respect.	1	2	3	4

SELF-EFFICACY/SELF-WORTH JUDGMENT (DOMAIN-SPECIFIC)
(State Form)

Directions:

A number of statements are given below which people have used to describe their beliefs about their jobs and evaluations of themselves on their jobs. There are no right or wrong answers. Read each statement carefully and then circle the answer that best describes how true each statement is for you, right now, at this moment.

Not At All
Moderately
Somewhat
Very Much So

- | | 1 | 2 | 3 | 4 |
|----------------------------------------------------------------------------------|---|---|---|---|
| 1. It upsets me when others expect too much of me on the job. | | | | |
| 2. It is hard for me to stay motivated on my job. | | | | |
| 3. The kind of work that appeals to me most is work I'm not qualified to do. | | | | |
| 4. My abilities are strong in the occupational areas I'm interested in. | | | | |
| 5. I'm doing the best I can on my job. | | | | |
| 6. I feel I made the wrong choice in my occupation. | | | | |
| 7. I have the necessary skills and abilities to do well in my job. | | | | |
| 8. I cannot complete my job tasks as quickly as others. | | | | |
| 9. I often have trouble organizing my work so that I can get everything done. | | | | |
| 10. I feel competent at my job. | | | | |
| 11. I feel I'm not very productive in my work. | | | | |
| 12. I consider myself to be a dedicated worker. | | | | |
| 13. I am capable of doing my job well. | | | | |
| 14. I have failed to do as well at my job as others. | | | | |
| 15. I can easily adapt to new requirements on my job. | | | | |
| 16. I accept my mistakes or poor performance on the job. | | | | |
| 17. When faced with a difficult problem at work, I know I can solve it if I try. | | | | |

SELF-EFFICACY/SELF-WORTH JUDGMENT (DOMAIN-SPECIFIC) (Continued)
(State Form)

	Not At All	Somewhat	Moderately So	Very Much So
18. To keep feeling good about myself on the job, I need to get a lot done and do it well.	1	2	3	4
19. Facing an unexpected problem or situation at work doesn't bother me a lot.	1	2	3	4
20. I feel stupid when I don't understand something about my job.	1	2	3	4
21. I am satisfied with my job skills and abilities.	1	2	3	4
22. I feel confident I can perform most tasks required of me on my job.	1	2	3	4
23. I know how to accomplish the jobs I have to do.	1	2	3	4
24. I like the way I handle my job responsibilities.	1	2	3	4
25. I feel disappointed with my performance on the job.	1	2	3	4
26. It is difficult for me to adjust to changes in my job tasks and responsibilities.	1	2	3	4
27. I feel I can handle any difficult situation that comes up at work.	1	2	3	4
28. I lack confidence in my ability to perform well in my job.	1	2	3	4
29. I feel I am a person of value to my professional field.	1	2	3	4
30. I am confident of my ability to succeed in my job.	1	2	3	4
31. I am proud of the way I handle difficult problems at work.	1	2	3	4
32. I lack confidence in my ability to be successful at new kinds of job tasks.	1	2	3	4
33. When difficult problems come up at work, I don't believe I can handle them as well as other people	1	2	3	4
34. I have the kinds of skills and abilities that are important in my job.	1	2	3	4

SELF-EFFICACY/SELF-WORTH JUDGMENT (DOMAIN-SPECIFIC) (Continued)
(State Form)

	Not At All	Somewhat	Moderately So	Very Much So
35. I am happy with the job skills and capabilities that I have.	1	2	3	4
36. I worry about not being able to perform my job as well as others.	1	2	3	4
37. I believe in myself even when I make mistakes in my job.	1	2	3	4
38. I have a positive attitude toward my job skills and abilities.	1	2	3	4
39. I know the steps I have to take to get ahead in my job.	1	2	3	4
40. I learn from the mistakes I make in my job.	1	2	3	4

WHAT'S IMPORTANT TO ME

Directions:

A number of statements below describe things people think are important to their way of life or job. There are no right or wrong answers. Read each statement carefully and then circle the answer that best describes how important the event described in each statement generally is for you.

How often is it important to you:

	Almost Never	Sometimes	Often	Almost Always
1. To make my own decisions in my job.	1	2	3	4
2. To be able to change things I don't like about my job.	1	2	3	4
3. To have major responsibilities in my job.	1	2	3	4
4. To have my job fit into my personal goals.	1	2	3	4
5. To learn new things in my job.	1	2	3	4
6. To know what's expected of me on the job.	1	2	3	4
7. To have feedback from my supervisor on how well I'm performing my job.	1	2	3	4
8. To have specific instructions about what to do in my job.	1	2	3	4
9. To work in an efficient and well-run organization.	1	2	3	4
10. To work toward tangible and well-defined results.	1	2	3	4
11. To do the best I can in my job.	1	2	3	4
12. To get my work done on time.	1	2	3	4
13. To be able to figure out difficult problems.	1	2	3	4
14. To have others respect my skills and performance.	1	2	3	4
15. To have the support of my supervisor and others on the job.	1	2	3	4
16. To have others think of me as competent.	1	2	3	4
17. To have others make major decisions about what should be done.	1	2	3	4
18. To prove that I can do things well.	1	2	3	4
19. To be successful in life.	1	2	3	4

WHAT'S IMPORTANT TO ME (Continued)

How often is it important to you:				
	Almost Never	Sometimes	Often	Almost Always
20. To work on something difficult.	1	2	3	4
21. To have well-defined goals or objectives.	1	2	3	4
22. To be practical and efficient.	1	2	3	4
23. To continually improve my abilities.	1	2	3	4
24. To know exactly what I'm trying to accomplish.	1	2	3	4
25. To stick with a problem until it's solved.	1	2	3	4
26. To do new and different things.	1	2	3	4
27. To keep my goals clearly in mind.	1	2	3	4
28. To schedule my time in advance.	1	2	3	4
29. To attain the highest standard of work.	1	2	3	4
30. To have well organized work habits.	1	2	3	4
31. To do more than is expected of me.	1	2	3	4
32. To know exactly what I'm aiming for.	1	2	3	4
33. To finish something once I start it.	1	2	3	4
34. To have a challenging job to tackle.	1	2	3	4
35. To accomplish something important.	1	2	3	4
36. To lead a well ordered life.	1	2	3	4
37. To do things that are according to my own plans.	1	2	3	4
38. To do things I can have control over.	1	2	3	4
39. To do things according to schedule.	1	2	3	4
40. To be responsible for my own successes or failures.	1	2	3	4

JOB SATISFACTION QUESTIONNAIRE

Directions:

A number of statements are given below which people have used to describe how satisfied they feel about various aspects of their present job. There are no right or wrong answers. Read each statement carefully and then circle the answer that best describes how satisfied you feel about the aspect of your present job described by the statement.

How satisfied are you in your present job with:

	Very Satisfied	Somewhat Satisfied	Neutral	Somewhat Dissatisfied	Very Dissatisfied
1. The chance to try out some of my own ideas.	1	2	3	4	5
2. The chance to do the kind of work that I do best.	1	2	3	4	5
3. The opportunities for advancement on this job.	1	2	3	4	5
4. The chance to be responsible for planning my work.	1	2	3	4	5
5. The way I am noticed when I do a good job.	1	2	3	4	5
6. Being able to see the results of the work I do.	1	2	3	4	5
7. The chance to do new and original things on my own.	1	2	3	4	5
8. The chance to do work that is well suited to my abilities.	1	2	3	4	5
9. The chances of getting ahead on this job.	1	2	3	4	5
10. The chance to make decisions on my own.	1	2	3	4	5
11. The way I get full credit for the work I do.	1	2	3	4	5
12. Being able to take pride in a job well done.	1	2	3	4	5
13. The chance to make use of my best abilities.	1	2	3	4	5
14. Being able to do something worthwhile.	1	2	3	4	5
15. The way promotions are given out on this job.	1	2	3	4	5
16. The chance to try something different.	1	2	3	4	5
17. The recognition I get for the work I do.	1	2	3	4	5
18. The chance to be responsible for the work of others.	1	2	3	4	5
19. The chance to do something that makes use of my abilities.	1	2	3	4	5

JOB SATISFACTION QUESTIONNAIRE (Continued)

How satisfied are you in your present job with:

	Very Satisfied	Somewhat Satisfied	Neutral	Somewhat Dissatisfied	Very Dissatisfied
20. The chance to do my best at all times.	1	2	3	4	5
21. The chances for advancement on this job.	1	2	3	4	5
22. The chance to develop new and better ways to do the job.	1	2	3	4	5
23. The way they usually tell me when I do my job well.	1	2	3	4	5
24. The freedom to use my own judgment.	1	2	3	4	5
25. The chance to make use of my abilities and skills.	1	2	3	4	5
26. The feeling of accomplishment I get from the job.	1	2	3	4	5
27. My chances for advancement.	1	2	3	4	5
28. The chance to try my own methods of doing the job.	1	2	3	4	5
29. The praise I get for doing a good job.	1	2	3	4	5
30. The responsibility of my job.	1	2	3	4	5

JOB ATTITUDES QUESTIONNAIRE

Directions:

A number of statements are given below which people have used to describe their attitudes about their jobs. There are no right or wrong answers. Read each statement carefully and then circle the answer that best describes your attitudes about your present job.

	Strongly Agree	Agree	Indecided	Disagree	Strongly Disagree
1. It annoys me to work after the normal quitting time.	1	2	3	4	5
2. I agree with the Army's policies on important matters relating to its employees.	1	2	3	4	5
3. I really enjoy working hard for the Army.	1	2	3	4	5
4. I think people should try to find better ways to accomplish work for the Army.	1	2	3	4	5
5. I believe "talking up" the Army is a good thing; it boosts morale.	1	2	3	4	5
6. It makes me angry when people suggest new ways for me to do my work.	1	2	3	4	5
7. I often volunteer to help out with someone else's workload if I am caught up on my own.	1	2	3	4	5
8. I find that my values and the Army's values are very similar.	1	2	3	4	5
9. I don't think my career will benefit by sticking with the Army indefinitely.	1	2	3	4	5
10. I am proud to tell others that I am part of the Army.	1	2	3	4	5
11. When the normal working day ends I usually leave the office even if I'm in the middle of a task.	1	2	3	4	5
12. When there's something new to learn at work I try to avoid it, it's just more work.	1	2	3	4	5
13. I have a great deal of loyalty to the Army.	1	2	3	4	5
14. The record of the Army is a good example of what dedicated people can get done.	1	2	3	4	5

JOB ATTITUDES QUESTIONNAIRE

Strongly Agree
Agree
Undecided
Disagree
Strongly Disagree

- | | | | | | |
|----------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 15. Very little that the employees want has any real importance to the Army. | 1 | 2 | 3 | 4 | 5 |
| 16. It makes me feel good to learn more and handle more responsibility on the job. | 1 | 2 | 3 | 4 | 5 |
| 17. I frequently disagree with the policies put forth by the Army. | 1 | 2 | 3 | 4 | 5 |
| 18. I work about as hard as I can for the Army. | 1 | 2 | 3 | 4 | 5 |
| 19. When there's an opportunity to learn more at work I do, so I can do a better job. | 1 | 2 | 3 | 4 | 5 |
| 20. I am extremely glad that I chose the Army to work for over other organizations I was considering at the time I joined. | 1 | 2 | 3 | 4 | 5 |
| 21. I really care about the fate of the Army. | 1 | 2 | 3 | 4 | 5 |
| 22. Learning new things on the job is very important to me. | 1 | 2 | 3 | 4 | 5 |
| 23. As long as I'm doing the kind of work I enjoy, it does not matter if I work for the Army or another organization. | 1 | 2 | 3 | 4 | 5 |
| 24. I doubt that I would do special work to help the Army. | 1 | 2 | 3 | 4 | 5 |
| 25. If someone can't find something good to say about the Army they shouldn't be working here. | 1 | 2 | 3 | 4 | 5 |
| 26. If the subject of the Army comes up in conversation, I usually say something good about it. | 1 | 2 | 3 | 4 | 5 |
| 27. I work for the Army because leaving would require considerable personal sacrifice (for example, benefits...). | 1 | 2 | 3 | 4 | 5 |
| 28. I would be very happy to spend the rest of my career with the Army. | 1 | 2 | 3 | 4 | 5 |
| 29. I would be happy and excited if I could think of a new way to get the work done that needs to be completed. | 1 | 2 | 3 | 4 | 5 |

JOB ATTITUDES QUESTIONNAIRE

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
30. If I'm working on something when the normal working day ends I usually stay to finish it.	1	2	3	4	5
31. I talk up the Army to my friends as a great organization to work for.	1	2	3	4	5
32. Taking my work home in order to make a deadline is fine and is not a problem.	1	2	3	4	5
33. I think that people these days move from organization to organization too often.	1	2	3	4	5
34. I really feel as if the Army's problems are my own.	1	2	3	4	5
35. I love the work I do but I hate Army policies.	1	2	3	4	5
36. Right now I am staying with the Army because I need the job, not because I like it.	1	2	3	4	5
37. It is good for the Army and myself if I take responsibility for the completion of my assignments.	1	2	3	4	5
38. I do not feel a strong sense of "belonging" to the Army.	1	2	3	4	5
39. I take a lot of pride in doing my job well.	1	2	3	4	5
40. For me the Army is the best of all possible organizations to work for.	1	2	3	4	5
41. Sometimes I work just hard enough to "get by" in the Army.	1	2	3	4	5
42. I think I could easily become attached to another organization as I am to the Army.	1	2	3	4	5
43. My loyalty is to my work, not to the Army.	1	2	3	4	5
44. I would accept almost any type of job assignment in order to keep working for the Army.	1	2	3	4	5

JOB ATTITUDES QUESTIONNAIRE

Strongly Agree
Agree
Undecided
Disagree
Strongly Disagree

- | | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 45. It makes me angry to be asked to put extra effort into my job. | 1 | 2 | 3 | 4 | 5 |
| 46. It is management's job, not mine, to see that assignments get completed on time. | 1 | 2 | 3 | 4 | 5 |
| 47. Sometimes I try to think of better ways to accomplish the work that needs to be done. | 1 | 2 | 3 | 4 | 5 |
| 48. I wouldn't mind working for a different organization as long as the type of work was similar. | 1 | 2 | 3 | 4 | 5 |
| 49. If another organization offered me a position I would not feel it was right to leave the Army. | 1 | 2 | 3 | 4 | 5 |
| 50. I like the sense of satisfaction you get when you complete a project after working long hours and making personal sacrifices. | 1 | 2 | 3 | 4 | 5 |
| 51. If a relative or friend were thinking about joining the Army, I would discourage him/her. | 1 | 2 | 3 | 4 | 5 |
| 52. I am not excited about my current job, nor happy with where it is going. | 1 | 2 | 3 | 4 | 5 |
| 53. The Army really inspires the very best in me in the way of job performance. | 1 | 2 | 3 | 4 | 5 |
| 54. I don't care how well I do in the Army; it is just a paycheck. | 1 | 2 | 3 | 4 | 5 |
| 55. It would not take much to cause me to leave the Army. | 1 | 2 | 3 | 4 | 5 |
| 56. The major satisfaction in my life comes from my job. | 1 | 2 | 3 | 4 | 5 |
| 57. The most important things that happen to me involve my work. | 1 | 2 | 3 | 4 | 5 |
| 58. I'm really a perfectionist about my work. | 1 | 2 | 3 | 4 | 5 |

JOB ATTITUDES QUESTIONNAIRE

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
59. I live, eat, and breathe my job.	1	2	3	4	5
60. I am very much involved personally in my work.	1	2	3	4	5
61. Most things in life are more important than work.	1	2	3	4	5
62. My job is important but not as important as my family.	1	2	3	4	5
63. I am happy with the Army benefits my family receives (for example, housing . . .).	1	2	3	4	5
64. Being in the Army and trying to raise a family is (would be) just too much stress.	1	2	3	4	5
65. Family life in the Army could be great with some small changes by the military.	1	2	3	4	5
66. Being married in the military is hard; if I could do as well as a civilian, I would not re-enlist.	1	2	3	4	5

ORGANIZATIONAL ATTACHMENT QUESTIONNAIRE

Directions:

A number of statements are given below which people have used to describe things that have an important influence on their decisions to stay or leave their present jobs. There are no right or wrong answers. Read each statement carefully and then circle how strongly each of the following influences your decision to stay in the Army or leave the Army?

	Strong Influence Toward Leaving	Moderate Influence Toward Leaving	Weak Influence Toward Leaving	No Influence Toward Staying or Leaving	Weak Influence Toward Staying	Moderate Influence Toward Staying	Strong Influence Toward Staying
1. The supervision's response to people's feelings.	1	2	3	4	5	6	7
2. The supervision's structuring of the work.	1	2	3	4	5	6	7
3. The reaction to performance from all levels.	1	2	3	4	5	6	7
4. The effectiveness of your department.	1	2	3	4	5	6	7
5. Your immediate work colleagues.	1	2	3	4	5	6	7
6. The effectiveness of the overall organization.	1	2	3	4	5	6	7
7. Your promotion prospects.	1	2	3	4	5	6	7
8. Your salary prospects.	1	2	3	4	5	6	7
9. Your job duties.	1	2	3	4	5	6	7
10. The values of the organization.	1	2	3	4	5	6	7
11. The reputation of the organization.	1	2	3	4	5	6	7
12. The geographical location of the organization.	1	2	3	4	5	6	7

JOB TENSION QUESTIONNAIRE

Directions:

A number of statements are given below which people have used to describe things that bother them about their present jobs or make them feel tense. There are no right or wrong answers. Read each statement carefully and then circle the answer that best describes how often you are bothered by what is described, in your present job.

How often are you bothered by:

Nearly All The Time
 Rather Often
 Sometimes
 Rarely
 Never

- | | 1 | 2 | 3 | 4 | 5 |
|----------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 1. Being unclear on just what the responsibilities of your job are. | 1 | 2 | 3 | 4 | 5 |
| 2. Not knowing what opportunities for advancement or promotion exist for you. | 1 | 2 | 3 | 4 | 5 |
| 3. Not knowing what your immediate supervisor thinks of you, how he/she evaluates your performance. | 1 | 2 | 3 | 4 | 5 |
| 4. The fact that you can't get information needed to carry out your job. | 1 | 2 | 3 | 4 | 5 |
| 5. Not knowing just what the people you work with expect of you. | 1 | 2 | 3 | 4 | 5 |
| 6. Feeling that you have too heavy a workload, one that you can't possibly finish during an ordinary work day. | 1 | 2 | 3 | 4 | 5 |
| 7. Thinking that the amount of work you have to do may interfere with how it gets done. | 1 | 2 | 3 | 4 | 5 |
| 8. Feeling that you have to do things on the job that are against your better judgment. | 1 | 2 | 3 | 4 | 5 |
| 9. Thinking that you'll not be able to satisfy the conflicting demands of various people over you. | 1 | 2 | 3 | 4 | 5 |

CAREER INTENTIONS

Directions:

Please circle the letter to the response which most closely indicates your feelings about each of the following questions.

1. If you were completely free to choose, would you prefer to stay in the Army or would you prefer to leave?
 - a. I definitely would prefer to leave.
 - b. I probably would prefer to leave.
 - c. I would be undecided about whether to leave or to stay.
 - d. I probably would prefer to stay.
 - e. I definitely would prefer to stay.

2. Which of the following best describes your career intentions at the present time?
 - a. I will stay in the Army until retirement.
 - b. I will re-enlist upon completion of my present obligation, but I am undecided about staying until retirement.
 - c. I am undecided about whether I will re-enlist.
 - d. I will probably leave the Army upon completion of my present obligation.
 - e. I will definitely leave the Army upon completion of my present obligation.

3. If you left the Army, would you return if you could?
 - a. I definitely would return.
 - b. I probably would return.
 - c. I don't know whether I would return or not.
 - d. I probably would not return.
 - e. I definitely would not return.

APPENDIX C:
INTERVIEW PROTOCOL

CONTROLLED INTERVIEW - EMPLOYEE DECISIONS

1. Have you made a decision about whether you plan to reinlist or not?
 - a) Was it a tough decision to make?
 - b) What were the reasons for your decision?
2. How do you feel about your ability to perform in your MOS over the past year?
3. Do you think there was a good match between what you could do and what you ended up doing?
4. How could the Army have improved your ability to perform better?
5. Do you think you could easily adjust to new requirements on the job?
6. Do you feel as though you had too much or too little control over what you did in performing your job? Explain.
7. Do you feel that you were making a contribution?
8. Do you think you had the ability to take charge?
9. In your opinion, what is the major reason(s) for soldiers in your MOS for reenlisting? For not reenlisting?
10. Who do you think was responsible for your success (or failure) in the Army?

APPENDIX D:
RESULTS OF INITIAL INTERNAL CONSISTENCY ANALYSES

Scale 1 Internal Consistency
(n = 117)

Item	Mean	SD	Item-Total Correlation
1	3.36	.73	.39
2	3.22	.70	.35
3	3.42	.73	.11
4	3.39	.68	.22
5	2.39	.93	.10
6	2.89	1.13	.34
7	3.25	.88	.36
8	3.36	.75	.50
9	3.05	.99	.44
10	3.02	.81	.32
11	3.38	.78	.39
12	3.28	.78	.60
13	2.87	.82	.09
14	2.21	.88	.16
15	3.06	.95	.29
16	3.16	.82	.49
17	3.11	.93	.33
18	3.39	.96	.20
19	3.09	.73	.39
20	3.76	.45	.48
21	3.68	.63	.30
22	3.16	.89	.25
23	2.66	.75	.34
24	3.28	.85	.38
25	3.46	.77	.39
26	3.47	.65	.61
27	3.56	.61	.44
28	3.21	.77	.14
29	2.82	.81	.27
30	2.94	1.11	.41
31	3.20	.73	.41
32	3.53	.62	.33
33	3.38	.70	.50
34	2.93	.97	.28
35	3.25	.68	.25
36	2.86	.86	.01
37	3.24	.72	.36
38	3.52	.65	.32
39	3.45	.65	.47
40	3.78	.54	.36

Alpha = .85

Scale 2 Internal Consistency
(n = 121)

Item	Mean	SD	Item-Total Correlation
1	2.87	.77	.35
2	3.30	.70	.47
3	3.12	.70	.37
4	3.64	.75	.39
5	2.51	1.16	.24
6	2.86	.87	.17
7	3.74	.54	.52
8	3.32	.82	.55
9	3.82	.43	.55
10	3.64	.66	.42
11	3.74	.53	.42
12	3.31	.88	.54
13	3.37	.72	.74
14	3.79	.52	.53
15	3.50	.74	.57
16	2.93	.74	.55
17	3.41	.73	.56
18	3.55	.56	.64
19	3.45	.70	.67
20	3.60	.55	.67
21	3.46	.78	.66
22	3.50	.65	.61
23	3.55	.52	.58
24	3.37	.79	.54
25	3.52	.79	.30
26	3.33	.78	.67
27	3.50	.73	.68
28	3.50	.30	.21
29	3.58	.63	.66
30	3.79	.60	.28
31	3.60	.68	.66
32	3.41	.30	.42
33	3.62	.57	.63
34	3.21	.69	.38
35	3.27	.71	.70
36	3.52	.67	.58
37	3.11	.72	.57
38	3.31	.71	.57
39	3.53	.66	.66
40	3.23	.30	.26

(continued)

Scale 2 Internal Consistency (continued)
(n = 121)

Item	Mean	SD	Item-Total Correlation
41	3.33	.71	.60
42	3.43	.72	.62
43	2.47	.90	.15
44	2.41	1.03	.15
45	3.22	.89	.29
46	3.68	.54	.62
47	2.50	.91	.17
48	3.44	.78	.36
49	3.47	.67	.59
50	3.01	.85	.20

Alpha = .94

Scale 3 Internal Consistency
(n = 120)

Item	Mean	SD	Item-Total Correlation
1	2.88	.82	.55
2	2.91	1.00	.45
3	2.91	.98	.43
4	3.58	.68	.43
5	3.13	.91	.41
6	3.47	.76	.16
7	3.51	.75	.31
8	2.34	.96	.47
9	3.10	.84	.54
10	3.47	.70	.22
11	3.05	.85	.43
12	3.13	.82	.64
13	2.99	.98	.42
14	2.88	.90	.50
15	2.88	.85	.39
16	3.03	.93	.45
17	3.14	.84	.59
18	3.48	.67	.30
19	3.23	.70	.31
20	2.08	.92	.12
21	2.37	.98	.19
22	3.44	.72	.42
23	2.76	.88	.54
24	3.17	.82	.51
25	3.51	.66	.46
26	2.64	.87	.13
27	2.98	.68	.41
28	3.21	.66	.13
29	3.28	.92	.36
30	2.75	1.02	.42

Alpha = .86

Scale 4 Internal Consistency
(n = 118)

Item	Mean	SD	Item-Total Correlation
1	3.10	.79	.22
2	2.83	.91	.39
3	2.89	1.08	.08
4	3.18	.74	.40
5	3.45	.67	.55
6	3.08	1.01	.34
7	3.70	.53	.58
8	3.52	.70	.29
9	3.65	.5	.27
10	3.51	.78	.56
11	3.62	.69	.45
12	3.51	.65	.50
13	3.74	.55	.50
14	3.68	.64	.49
15	3.43	.76	.52
16	2.97	.96	.35
17	3.53	.64	.62
18	2.89	.90	.16
19	2.43	1.07	.24
20	3.37	.74	.23
21	3.31	.84	.55
22	3.70	.54	.64
23	3.65	.59	.64
24	3.50	.65	.58
25	3.65	.61	.42
26	3.61	.60	.33
27	3.36	.75	.53
28	3.73	.69	.39
29	3.57	.71	.61
30	3.68	.58	.67
31	3.41	.73	.58
32	3.64	.63	.50
33	3.64	.70	.38
34	3.51	.71	.66
35	3.37	.78	.59
36	3.60	.64	.36
37	3.44	.79	.37
38	3.61	.69	.62
39	3.30	.80	.46
40	3.65	.59	.37

Alpha = .91

Scale 5 Internal Consistency
(n = 114)

Item	Mean	SD	Item-Total Correlation
1	3.45	.72	.52
2	3.19	.84	.36
3	3.57	.58	.26
4	3.54	.63	.36
5	2.44	.94	.22
6	3.03	1.08	.34
7	3.33	.78	.54
8	3.59	.61	.44
9	3.08	1.03	.56
10	3.31	.69	.46
11	3.35	.78	.44
12	3.37	.76	.64
13	2.84	.90	.26
14	2.25	.97	.21
15	3.04	.96	.38
16	3.14	.80	.59
17	3.12	.89	.47
18	3.37	.89	.56
19	3.23	.69	.25
20	3.75	.43	.51
21	3.67	.59	.28
22	3.33	.84	.37
23	3.10	.65	.51
24	3.36	.74	.40
25	3.33	.81	.58
26	3.45	.72	.64
27	3.56	.61	.58
28	3.18	.71	.21
29	2.83	.82	.31
30	2.61	1.19	.16
31	3.21	.77	.52
32	3.60	.56	.44
33	3.54	.67	.51
34	2.94	.92	.25
35	3.31	.69	.38
36	2.88	.77	.11
37	3.25	.72	.39
38	3.59	.61	.43
39	3.47	.61	.51
40	3.71	.58	.50

Alpha = .89

Scale 6 Internal Consistency (continued)
(n = 121)

Item	Mean	SD	Item-Total Correlation
41	3.44	.67	.66
42	3.49	.70	.69
43	2.75	.90	.36
44	2.56	1.02	.16
45	3.28	.89	.32
46	3.74	.51	.62
47	2.51	.84	.37
48	3.50	.77	.47
49	3.51	.61	.64
50	3.03	.94	.12

Alpha = .94

Scale 7 Internal Consistency
(n = 116)

Item	Mean	SD	Item-Total Correlation
1	2.96	.76	.52
2	2.98	.94	.48
3	3.07	.97	.44
4	3.38	.76	.28
5	3.21	.83	.39
6	3.33	.88	.22
7	3.47	.77	.40
8	2.56	.94	.49
9	3.06	.79	.40
10	3.45	.69	.22
11	3.08	.87	.44
12	3.15	.85	.55
13	2.99	.92	.49
14	3.00	.72	.55
15	2.82	.92	.32
16	2.90	.89	.52
17	3.25	.78	.57
18	3.47	.68	.43
19	3.48	.61	.36
20	2.43	1.06	.16
21	2.51	.96	.17
22	3.47	.69	.56
23	2.74	.86	.44
24	3.16	.84	.42
25	3.55	.57	.47
26	2.74	1.00	.26
27	2.97	.67	.42
28	3.25	.78	.19
29	3.24	.91	.37
30	2.88	.94	.48

Alpha = .87

Scale 8 Internal Consistency
(n = 115)

Item	Mean	SD	Item-Total Correlation
1	3.14	.86	.17
2	2.97	.92	.27
3	2.77	1.05	.14
4	3.39	.77	.42
5	3.30	.80	.52
6	3.04	1.11	.22
7	3.55	.76	.59
8	3.56	.65	.49
9	3.69	.54	.49
10	3.59	.67	.71
11	3.43	.93	.32
12	3.50	.71	.63
13	3.75	.51	.66
14	3.60	.75	.49
15	3.37	.73	.50
16	2.94	1.01	.25
17	3.51	.65	.68
18	2.93	.96	.15
19	2.70	.95	.14
20	3.39	.77	.25
21	3.37	.76	.72
22	3.62	.64	.70
23	3.66	.61	.65
24	3.50	.67	.68
25	3.74	.52	.60
26	3.40	.83	.34
27	3.37	.73	.63
28	3.68	.72	.39
29	3.50	.71	.59
30	3.59	.66	.71
31	3.48	.68	.69
32	3.69	.61	.61
33	3.50	.88	.34
34	3.55	.64	.64
35	3.37	.71	.59
36	3.56	.74	.41
37	3.35	.78	.43
38	3.63	.57	.72
39	3.36	.74	.56
40	3.62	.59	.45

Alpha = .92

Scale 9 Internal Consistency
(n = 120)

Item	Mean	SD	Item-Total Correlation
1	3.31	.75	.45
2	3.06	.87	.43
3	3.31	.80	.56
4	3.32	.83	.49
5	3.53	.65	.64
6	3.59	.64	.65
7	3.33	.81	.45
8	2.83	.99	.25
9	3.66	.63	.54
10	3.47	.73	.59
11	3.76	.50	.62
12	3.67	.61	.63
13	3.63	.61	.68
14	3.44	.78	.58
15	3.58	.66	.61
16	3.48	.70	.62
17	2.84	.92	-.07
18	3.43	.74	.56
19	3.78	.45	.65
20	3.13	.72	.41
21	3.43	.67	.59
22	3.57	.60	.68
23	3.69	.50	.64
24	3.60	.59	.60
25	3.53	.59	.71
26	3.51	.64	.60
27	3.63	.55	.64
28	3.28	.79	.52
29	3.55	.63	.71
30	3.52	.69	.61
31	3.26	.75	.59
32	3.57	.65	.62
33	3.63	.58	.69
34	3.45	.71	.51
35	3.53	.69	.70
36	3.48	.73	.60
37	3.39	.76	.59
38	3.47	.72	.43
39	3.30	.74	.58
40	3.73	.53	.54

Alpha = .95

APPENDIX E:
ITEM LEVEL FACTOR ANALYSES RESULTS

Scale 1 Rotated Factor Matrix
(n = 117)

Items	Factor 1	Factor 2	Factor 3
39	0.74		
26	0.66		
23	0.65		
35	0.57		
37	0.56		
20	0.55		
33	0.54		
38	0.51		
10	0.42		
15		0.67	
12		0.65	
9		0.53	
7		0.52	
16		0.45	
27		0.45	
6		0.43	
8		0.41	
22		0.36	
1		0.35	
29		0.29	
24			0.65
2			0.60
11			0.55
21			0.43
34			0.41

*Note: Subscale loadings on factors other than their primary factor are deleted from this Table.

Scale 2 Rotated Factor Matrix
(n = 121)

Items	Factor 1	Factor 2	Factor 3
41	0.77		
35	0.76		
2	0.70		
37	0.67		
49	0.64		
39	0.64		
42	0.59		
46	0.53		
38	0.57		
23	0.55		
36	0.52		
1	0.48		
43	0.46		
11		0.67	
33		0.67	
31		0.61	
34		0.55	
9		0.54	
3		0.53	
12		0.46	
19			0.66
17			0.60
20			0.59
22			0.58

*Note: Subscale loadings on factors other than their primary factor are deleted from this Table.

Scale 3 Rotated Factor Matrix
(n = 120)

Items	Factor 1	Factor 2	Factor 3
23	0.73		
12	0.73		
9	0.69		
14	0.69		
1	0.66		
27	0.63		
24	0.62		
4	0.56		
16	0.55		
13	0.54		
29	0.45		
19		0.70	
7		0.63	
22		0.61	
18		0.60	
5		0.47	
3			0.71
2			0.64
15			0.62
30			0.44

*Note: Subscale loadings on factors other than their primary factor are deleted from this Table.

Scale 4 Rotated Factor Matrix
(n = 118)

Items	Factor 1	Factor 2	Factor 3	Factor 4
30	0.78			
34	0.76			
23	0.70			
13	0.69			
10	0.67			
22	0.67			
29	0.65			
7	0.60			
17	0.48			
37	0.47			
28	0.42			
24		0.68		
15		0.60		
39		0.59		
40		0.57		
31		0.54		
5		0.49		
12		0.46		
16		0.38		
33			0.66	
25			0.63	
36			0.56	
9			0.54	
6				0.59
2				0.54
4				0.51

*Note: Subscale loadings on factors other than their primary factor are deleted from this Table.

Scale 5 Rotated Factor Matrix
(n = 114)

Items	Factor 1	Factor 2	Factor 3
35	0.69		
37	0.68		
23	0.67		
19	0.62		
8	0.62		
20	0.60		
10	0.56		
25	0.52		
38	0.52		
33	0.49		
4	0.44		
32	0.41		
19	0.37		
7		0.64	
5		0.61	
27		0.60	
15		0.58	
9		0.57	
6		0.56	
17		0.52	
24			0.75
2			0.64
18			0.56
21			0.46
1			0.45
13			0.44

*Note: Subscale loadings on factors other than their primary factor are deleted from this Table.

Scale 6 Rotated Factor Matrix
(n = 121)

Items	Factor 1	Factor 2	Factor 3	Factor 4
49	0.66			
37	0.63			
2	0.63			
41	0.64			
48	0.62			
1	0.61			
27	0.60			
29	0.59			
15	0.59			
46	0.58			
39	0.58			
42	0.55			
38	0.54			
35	0.51			
17	0.51			
24	0.50			
21		0.68		
43		0.68		
22		0.63		
18		0.58		
20		0.56		
8		0.51		
31		0.48		
40			0.72	
34			0.65	
33			0.55	
11				0.63
13				0.49

*Note: Subscale loadings on factors other than their primary factor are deleted from this Table.

Scale 7 Rotated Factor Matrix
(n = 116)

Items	Factor 1	Factor 2	Factor 3
14	0.74		
27	0.69		
1	0.69		
23	0.68		
12	0.67		
9	0.66		
25	0.59		
16	0.58		
13	0.53		
24	0.47		
29	0.46		
19		0.78	
18		0.77	
7		0.60	
17		0.58	
22		0.53	
8		0.51	
5		0.49	
20		0.31	
3			-0.62
2			-0.53
15			-0.47

*Note: Subscale loadings on factors other than their primary factor are deleted from this Table.

Scale 8 Rotated Factor Matrix
(n = 115)

Items	Factor 1	Factor 2
38	0.78	
34	0.78	
30	0.76	
23	0.73	
22	0.73	
13	0.71	
31	0.70	
24	0.70	
21	0.69	
10	0.69	
7	0.67	
35	0.66	
39	0.63	
27	0.60	
17	0.59	
12	0.59	
40	0.56	
5	0.56	
15	0.55	
29	0.51	
4	0.42	
37	0.41	
9		0.71
14		0.65
33		0.54
36		0.53

*Note: Subscale loadings on factors other than their primary factor are deleted from this Table.

Scale 9 Rotated Factor Matrix
(n = 120)

Items	Factor 1	Factor 2
36	0.81	
30	0.74	
28	0.72	
37	0.69	
39	0.66	
16	0.62	
27	0.58	
22	0.57	
33	0.56	
14	0.56	
24	0.56	
38	0.53	
9	0.52	
21	0.48	
3		0.79
5		0.71
34		0.67
4		0.66
23		0.62
25		0.62
29		0.60
13		0.59
1		0.58
35		0.57
11		0.55
31		0.55
2		0.53
20		0.50
40		0.48

*Note: Subscale loadings on factors other than their primary factor are deleted from this Table.

APPENDIX F:
ITEMS LOADING ON EACH SUBSCALE

Scale 1 Subscale Items

Subscale 1 - Global trait perceptions of control maintenance

- 10. I make decisions easily.
- 20. I can succeed at most things if I try hard enough.
- 23. I can figure out problems that other people have trouble with.
- 26. I feel I can control what I am doing.
- 33. I am a self-sufficient person.
- 35. I look for new ways to solve problems.
- 37. I try to be creative in my approach to things.
- 38. I like to plan and prepare for my future.
- 39. Once I decide to do something, I can carry it through.

Subscale 2 - Global trait beliefs about locus of responsibility

- 1. I make my own decisions.
- 6. Trusting to fate is not as good as making a decision to take a definite course of action.
- 7. Becoming a success is a matter of hard work; luck has little or nothing to do with it.
- 8. When I make plans, I am confident that I can make them work.
- 9. In my case, getting what I want has little or nothing to do with luck.
- 12. By taking an active part in my life decisions, I can control most events.
- 15. Most misfortunes are the result of low ability, lack of effort, laziness, or all three.
- 16. I have little influence over the things that happen to me.
- 22. I don't believe a person can really be a master of his fate.

Scale 1 Subscale Items (continued)

- 27. Being a success is mostly a matter of hard work.
- 29. People don't realize how much they personally determine their own outcomes.
- 31. Self-regulation of one's behavior is always possible.

Subscale 3 - Global trait perceptions of ability to take personal control

- 2. I feel confused about what's going to happen to me.
- 11. In much of life, I am a victim of forces I can neither understand nor control.
- 21. We might just as well make many of our decisions by flipping a coin.
- 24. I feel I don't have enough control over the direction my life is taking.
- 34. It makes no sense to have opinions about issues over which I have no control.

Scale 2 Subscale Items

Subscale 1 - Global trait perceptions of self-confidence, adaptability, and worth

1. I keep working on difficult things even when I believe they might be hopeless.
2. I know how to go after what I want.
23. I can do just about anything I set my mind to do.
35. When I set a goal, I usually meet it.
36. Even though there are things I can't do well, I believe in myself.
37. When things go wrong, I am good at making them right again.
38. I handle my problems very well.
39. For me, anything is possible if I believe in myself.
41. I know how to go after what I want.
42. I am self-sufficient.
46. I am a worthwhile person.
48. I get a lot of pleasure from learning about things.
49. When faced with a difficult problem, I know I can solve it if I try.

Subscale 2 - Global trait perceptions of competence and success

3. Even when I make decisions, I am not sure they are the right ones.
9. I feel like a failure.
11. I feel inadequate.
12. I feel self-confident.
31. I take a positive attitude toward myself.
33. I feel disappointed with myself.
34. I often fail to do things as well as I would like.

Scale 2 Subscale Items (continued)

Subscale 3 - Global trait perceptions of abilities and skills

- 17. I seem to be about as capable and smart as most others around me.
- 19. I think I am intelligent.
- 20. I am proud of my skills and abilities.
- 22. I am able to do most things as well as other people.

Scale 3 Subscale Items

Subscale 1 - Domain-specific trait beliefs about locus of responsibility

1. Getting a good job is mostly a matter of luck and knowing the right people.
4. When someone criticizes my performance at work, I feel there is nothing I can do about it.
9. Job promotions come if your supervisor likes you, not because of the work you do.
12. There is little chance for promotion on the job unless a person gets a break.
13. My job is so regimented, there's not much room for personal choice.
14. Getting a good job is mostly a matter of being lucky enough to be in the right place at the right time.
16. When I look at it carefully I realize it is impossible for me to have any really important influence over what happens to me in the military.
23. Getting ahead on the job depends on other people liking you.
24. Positive things that happen at work are mostly a matter of chance.
27. Being in the right place at the right time gets people the good jobs.
29. The bad performance ratings I've gotten are due to unfair supervisors.

Subscale 2 - Domain-specific trait perceptions of ability to take personal control

5. I believe I can do whatever I want in my career.
7. When I am rewarded for my performance, it is because I deserved it.
18. I enjoy having to rely on myself to solve problems in my job.
19. If I have a problem related to work, I can usually solve it myself.
22. My successes at work are mostly due to my ability.

Subscale 3 - Domain-specific trait beliefs about reasons for success

2. Getting promoted depends on how much ability you show on the job.
3. There is a direct connection between how hard I work and the promotions/successes I get.

Scale 3 Subscale Items (continued)

- 15. It's not who you know but what you know that really counts in getting ahead.**
- 30. Most decisions about how well I do my job are made by people I respect.**

Scale 4 Subscale Items

Subscale 1 - Domain-specific trait perceptions of self-confidence, competence and worth

- 7. I have the necessary skills and abilities to do well in my job.
- 10. I feel competent at my job.
- 13. I am capable of doing my job well.
- 17. When faced with a difficult problem at work, I know I can solve it if I try.
- 22. I feel confident I can perform most tasks required of me on my job.
- 23. I know how to accomplish the jobs I have to do.
- 28. I lack confidence in my ability to perform well in my job.
- 29. I feel I am a person of value to my professional field.
- 30. I am confident of my ability to succeed in my job.
- 34. I have the kinds of skills and abilities that are important in my job.
- 37. I believe in myself even when I make mistakes in my job.

Subscale 2 - Domain-specific trait perceptions of adaptability and self-acceptance

- 5. I'm doing the best I can on my job.
- 12. I consider myself to be a dedicated worker.
- 15. I can easily adapt to new requirements on my job.
- 16. I accept my mistakes or poor performance on the job.
- 24. I like the way I handle my job responsibilities.
- 31. I am proud of the way I handle difficult problems at work.
- 39. I know the steps I have to take to get ahead in my job.
- 40. I learn from the mistakes I make in my job.

Scale 4 Subscale Items (continued)

Subscale 3 - Domain-specific trait perceptions of self-adequacy and success

- 9. I often have trouble organizing my work so that I can get everything done.
- 25. I feel disappointed with my performance on the job.
- 33. If difficult problems come up at work, I don't believe I can handle them as well as other people.
- 36. I worry about not being able to perform my job as well as others.

Subscale 4 - Domain-specific trait perceptions of competence and confidence with respect to career choice

- 2. It is hard for me to stay motivated on my job.
- 4. My abilities are strong in the occupational areas I'm interested in.
- 6. I feel I made the wrong choice in my occupation.

Scale 5 Subscale Items

Subscale 1 - Global state perceptions of control maintenance

- 4. I am indecisive.
- 8. When I make plans, I am confident that I can make them work.
- 10. I make decisions easily.
- 19. I can get people to do what I ask.
- 20. I can succeed at most things if I try hard enough.
- 23. I can figure out problems that other people have trouble with.
- 25. I believe that being smart has more to do with success than being lucky.
- 32. I can cope with the ups and downs of life.
- 33. I am a self-sufficient person.
- 35. I look for new ways to solve problems.
- 37. I try to be creative in my approach to things.
- 38. I like to plan and prepare for my future.
- 39. Once I decide to do something, I can carry it through.

Subscale 2 - Global state beliefs about locus of responsibility

- 5. My misfortunes result from the mistakes that I make.
- 6. Trusting to fate is not as good as making a decision to take a definite course of action.
- 7. Becoming a success is a matter of hard work; luck has little or nothing to do with it.
- 9. In any case, getting what I want has little or nothing to do with luck.
- 15. Most misfortunes are the result of low ability, lack of effort, laziness, or all three.
- 17. My successes and failures are my own doing.
- 27. Being a success is mostly a matter of hard work.

Scale 3 Subscale Items continued

Subscale 3 - Global state perceptions of ability to take personal control

1. I make my own decisions.
2. I feel confused about what's going to happen to me.
13. Most people don't realize the extent to which their lives are controlled by accidental happenings.
18. I have little control over the direction my life is taking.
21. We might just as well make many of our decisions by flipping a coin.
24. I feel I don't have enough control over the direction my life is taking.

Scale 6 Subscale Items

Subscale 1 - Global state perceptions of self-confidence, adaptability, and competence

1. I keep working on difficult things even when I believe they might be hopeless.
2. I know how to go after what I want.
15. I feel I am a person of worth.
17. I seem to be about as capable and smart as most others around me.
24. When things don't go well, I don't give up because I know I can reach my goal eventually.
27. I feel competent.
29. I feel I am a person of worth, and at least on an equal basis with others.
35. When I set a goal, I usually meet it.
37. When things go wrong, I am good at making them right again.
38. I handle my problems very well.
39. For me anything is possible if I believe in myself.
41. I know how to go after what I want.
42. I am self-sufficient.
46. I am a worthwhile person.
48. I get a lot of pleasure from learning about things.
49. When faced with a difficult problem, I know I can solve it if I try.

Subscale 2 - Global state perceptions of self-worth and self-acceptance

8. I feel satisfied with myself.
18. I like the kind of person I am.
20. I am proud of my skills and abilities.
21. I am happy with myself most of the time.

Scale 6 Subscale Items (continued)

- 22. I am able to do most things as well as other people.**
- 31. I take a positive attitude toward myself.**
- 43. I have some faults but they don't bother me.**

Subscale 3 - Global state perceptions of ability to be successful

- 33. I feel disappointed with myself.**
- 34. I often fail to do things as well as I would like.**
- 40. I worry about not being able to do things as well as others.**

Subscale 4 - Global state perceptions of self-confidence and adequacy

- 11. I feel inadequate.**
- 13. I'm pretty sure of myself.**

Scale 7 Subscale Items

Subscale 1 - Domain-specific state beliefs about locus of responsibility

1. Getting a good job is mostly a matter of luck and knowing the right people.
9. Job promotions come if your supervisor likes you, not because of the work you do.
12. There is little chance for promotion on the job unless a person gets a break.
13. My job is so regimented, there's not much room for personal choice.
14. Getting a good job is mostly a matter of being lucky enough to be in the right place at the right time.
16. When I look at it carefully I realize it is impossible for me to have any really important influence over what happens to me in the military.
23. Getting ahead on the job depends on other people liking you.
24. Positive things that happen at work are mostly a matter of chance.
25. If people want good opportunities in their career, they have to depend on luck.
27. Being in the right place at the right time gets people the good jobs.
29. The bad performance ratings I've gotten are due to unfair supervisors.

Subscale 2 - Domain-specific state perceptions of control maintenance

5. I believe I can do whatever I want in my career.
7. When I am rewarded for my performance, it is because I deserved it.
8. I believe I can change things I don't like about my job.
17. When I get a good job, it is a direct result of my own ability and/or motivation.
18. I enjoy having to rely on myself to solve problems in my job.
19. If I have a problem related to work, I can usually solve it myself.
20. I am responsible for most of the problems I have on the job.
22. My successes at work are mostly due to my ability.

Scale 7 Subscale Items (continued)

Subscale 3 - Domain-specific state perceptions of locus of responsibility for events

- 2. Getting promoted depends on how much ability you show on the job.**
- 3. There is a direct connection between how hard I work and the promotions/successes I get.**
- 15. It's not who you know but what you know that really counts in getting ahead.**

Scale 8 Subscale Items

Subscale 1 - Domain-specific state perceptions of self-confidence, competence and worth

- 4. My abilities are strong in the occupational areas I'm interested in.
- 5. I'm doing the best I can on my job.
- 7. I have the necessary skills and abilities to do well in my job.
- 10. I feel competent at my job.
- 12. I consider myself to be a dedicated worker.
- 13. I am capable of doing my job well.
- 15. I can easily adapt to new requirements on my job.
- 17. When faced with a difficult problem at work, I know I can solve it if I try.
- 21. I am satisfied with my job skills and abilities.
- 22. I feel confident I can perform most tasks required of me on my job.
- 23. I know how to accomplish the jobs I have to do.
- 24. I like the way I handle my job responsibilities.
- 27. I feel I can handle any difficult situation that comes up at work.
- 29. I feel I am a person of value to my professional field.
- 30. I am confident of my ability to succeed in my job.
- 31. I am proud of the way I handle difficult problems at work.
- 34. I have the kinds of skills and abilities that are important in my job.
- 35. I am happy with the job skills and capabilities that I have.
- 37. I believe in myself even when I make mistakes in my job.
- 38. I have a positive attitude toward my job skills and abilities.
- 39. I know the steps I have to take to get ahead in my job.
- 40. I learn from the mistakes I make in my job.

Scale 8 Subscale Items (continued)

Subscale 2 - Domain-specific state perceptions of self-adequacy and success

- 9. I often have trouble organizing my work so that I can get everything done.
- 14. I have failed to do as well at my job as others.
- 33. If difficult problems come up at work, I don't believe I can handle them as well as other people.
- 36. I worry about not being able to perform my job as well as others.

Scale 9 Subscale Items

Subscale 1 - Trait importance of order, structure, efficiency

- 9. To work in an efficient and well-run organization.
- 14. To have others respect my skills and performance.
- 16. To have others think of me as competent.
- 21. To have well-defined goals or objectives.
- 22. To be practical and efficient.
- 24. To know exactly what I'm trying to accomplish.
- 27. To keep my goals clearly in mind.
- 28. To schedule my time in advance.
- 30. To have well organized work habits.
- 33. To finish something once I start it.
- 36. To lead a well ordered life.
- 37. To do things that are according to my own plans.
- 38. To do things I can have control over.
- 39. To do things according to schedule.

Subscale 2 - Trait importance of challenge, growth, responsibility

- 1. To make my own decisions in my job.
- 2. To be able to change things I don't like about my job.
- 3. To have major responsibilities in my job.
- 4. To have my job fit into my personal goals.
- 5. To learn new things in my job.
- 11. To do the best I can in my job.
- 13. To be able to figure out difficult problems.
- 20. To work on something difficult.

Scale 9 Subscale Items (continued)

- 23. To continually improve my abilities.
- 25. To stick with a problem until it's solved.
- 29. To attain the highest standard of work.
- 31. To do more than is expected of me.
- 34. To have a challenging job to tackle.
- 35. To accomplish something important.
- 40. To be responsible for my own successes or failures.